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ANNUAL REPORT OF THE SAN FRANCISCO BOARD OF HEALTH.

OFFICE OF THE BOARD OF HEALTH,
CITY AND COUNTY OF SAN FRANCISCO, CALIFORNIA, JUNE 30,
1903.

Hon. E. E. Schmitz, Mayor City and County of San Francisco, Cal.,—Sir: In accordance with Section 9, Article 16, of the charter of the city and county of San Francisco, I have the honor to file herewith the report of the Department of Public Health for the fiscal year beginning July 1, 1902, and ending June 30, 1903.

During the recent discussion of your Honor's recommendations concerning the appropriation of this department, the duties of its various employes and the work of the various bureaus was elaborately reviewed, and as the statements then made are doubtless still fresh in your Honor's memory, it will not be necessary to dwell further upon their work, beyond calling your Honor's attention to the reports of the chief inspectors, which set forth in great detail the work of their prospective corps. To these and to the accompanying report of the health officer you are referred for detailed information concerning the particulars of the year's work. The careful scrutiny which your Honor will doubtless give to the report of the superintendent of the Alms House will impress you with the enconomy of its administration. Concerning that institution I desire in the strongest way to once more urge upon your Honor the importance of legislation suggested a year ago, having for its purpose the protection of the city against the burden of improper charges. The law of this state, in accordance with the moral law, requires that a parent shall support and maintain his child during the years of his minority, but the corresponding and reciprocal equity prevailing in the moral order, which requires a child in the years of his manhood to support his aged, indigent, or decrepit parent does not exist in the law of this state in a satisfactory form. A parent may maintain an action for support, a slow and by no means certain remedy, and one always accompanied by expense, the maintenance of parents meantime falling upon the city. The child may appeal to the penal law, and a criminal will immediately force the recognition of the parental obligation. An amendment to the penal code compelling the support of indigent, infirm, and helpless parents by their grown children having the means, would supply an adequate and speedy remedy, a moral lever in the community and an economic assistance to the Alms House, a large fraction of whose inmates are a legitimate charge upon unnatural children; for to their lasting disgrace let it be said that not once, but many times, the superintendent of the Alms House has found well-to-do persons, one of whose parents was a public charge of which his contemptible child refused to relieve the city.

Of the City and County Hospital not too much can be said in praise of the efficient administration of the resident physician, who under the most disadvantageous surroundings, and with the most limited means at the disposition of the chief of any public hospital in the United States, has maintained that institution with remarkable success. For many years a new City and County Hospital has been an urgent necessity, and with every year the necessity has become more urgent until this department, which has constantly lifted its voice in ceaseless iteration of that demand, finds it difficult to obtain the words that will appropriately express that terrible need without indecently exposing municipal sores.

Were it not for the overshadowing need of a general hospital, more attention would doubtless be given to the erection of a new smallpox hospital. The site has been selected and purchased, and it is to be hoped that your Honor will exercise your influence to the end that your departure from public office will find that sadly-needed structure completed and a lasting monument of your energy.

With these general observations I leave consideration of the particular needs of the various institutions to their heads, and beg your Honor's consideration of certain matters of more than ordinary importance. And first of all I would urge upon your Honor that the time is ripe for the organization of a system for the collection, by the municipality, of garbage. Its collection by private individuals is not only incomplete and unsatisfactory, but is a source of constant complaint from individuals, and under supervision of private scavengers is found to be a constant cause of unsanitary conditions in localities. The present method of collecting and disposing of garbage is neither scientific nor sanitary, and because of the lack of system that follows from the labor of unorganized and irresponsible individuals the present methods never can be satisfactory. The larger cities of the United States, as well as nearly all the cities in Europe, have made the collection and disposition of garbage a municipal function, and the results obtained have been so eminently satisfactory as to relegate methods like our own to the boneyard of the obsolete. This department would most willingly assist your Honor in originating a reform of this character, and we would most respectfully suggest that an estimate be obtained from the Board of Public Works of the cost of instituting a system of municipal collection of garbage, and we shall be pleased to supply the Board of Works or your Honor with all necessary data, and we respectfully submit that your Honor's term is yet long enough to inaugurate the much needed scavenger reform.

During the past fiscal year your Honor has seen fit to prevent the publication of the "Bulletin of Vital Statistics," which for years past has been a notable feature of this department, and has earned such high praise from scientific sources, and obtained such distinguished consideration at the great World's Exposition in Paris in 1900 that this city has maintained an unusually high place as a collector and distributor of vital statistics. Your reasons for this unusual action you have never made public, but in view of your hostility to this Board because of what you have alleged to be the issuance of false reports of the existence of bubonic plague, it is not unreasonable to presume that your Honor refused to permit the publication of this journal because, if they occurred, cases of bubonic plague would be reported therein like any other contagious disease. We would not do your Honor the injustice to believe that you do not think that the suppression of truth is an offense where that truth is due, yet we are compelled to believe that your Honor exerted your influence to prevent the publication of statistic information in order to suppress the publication of a fact perceived and admitted in private by yourself to the Surgeon-general of the Public Health and Marine Hospital Service, but always denied in public. The variety of views which your Honor has entertained upon this subject seem to be analogous to those varying reflections multiple and contradictory in color which the facets of a crystal manage to give to the same light. A year ago your Honor attempted the removal of certain members of this board, "for declaring, without proper foundation in fact, the existence of bubonic plague." A few months since your Honor attached his signature to a document stating that "competent medical authority" had declared the existence of bubonic plague. No higher authority than the commission appointed by the President of the United States had passed upon this question in the meantime. Its report was in existence over a year ago, and as your Honor, according to your published statement, examined "every accessible record," it was doubtless in your hands at the time you attempted the eviction of the Board of Health. The Board is now placed in this painful position that it must think either that your Honor did not believe what you then said, or do not believe what you have now signed. So, that in endeavoring to ascertain your Honor's real view of the existence or non-existence of plague, we are embarrassed by the number and variety of your Honor's statements, which unfortunately are as numerous and conflicting as those varying descriptions of the elephant attributed by the poet to the blind men of Hindoostan.

But whether or not your Honor agreed with the statements of fact published in the "Bulletin" you could not prevent the facts themselves from becoming public, for they were reported by the federal authorities and appeared in the "Bulletin" of the Marine Hospital Service, and your Honor's action had only this effect that in the East exaggerated rumors were born of a belief that we were suppressing a situation more serious than that which existed. A frank statement of the facts would have disarmed suspicion by revealing the real proportions of the disease, and the splendid defense against its attack. The precautions taken would have appealed to every health officer throughout the country, and we would have been assured of their assistance in quieting local fears, but your Honor chose to adopt a policy that made an enemy of the health authorities of the country, for, denied the ordinary channels of information, and bound to protect the states they serve, they took precautions in excess of the actual requirements of the situation, and to-day we are compelled to take sanitary measures at considerable expense to satisfy the fears which the suppression of the truth aroused among the sanitary officers of our country. Your Honor seems to believe that the admission of the existence of sporadic cases of plague would injure the commercial interests of this city. Whether you believe it or not, our sister states believe that occasional cases have occurred in this city, and the business of San Francisco is greater in volume to-day than ever before in its history. The example of other cities of the world is before us, and it would have been the part of wisdom to profit by their example. Melbourne, Australia, had and still has plague cases, and declares it without fear and her business interests remain uninjured. Cape Town, South Africa, Hong-kong, to a far greater degree than we, Yokohama, Honolulu, all have and continue to have plague, and commerce remains undisturbed in its proportions and secure in its revenues. Even New York City announced to the country as a piece of curious news, the presence of two cases of plague in its harbor, and no moan went up from the mercantile throat of New York, nor did slander beslime with her foul tongue the characters of tried gentlemen and proven officials, because loyal to their oath of office and the principles of a noble profession, they declined to be bullied into falsehood or threatened into silence.

The former State Board of Health who gave your Honor the example in misstatement and suppression was removed by the present Governor, because of the incalculable harm their policy had done to California, and with all respect to your Honor might profit by the example.

And this brings us to the necessity of reviewing briefly the work which this department has undertaken in the Chinese district in co-operation with the present State Board of Health and the Public Health and Marine Hospital Service, and the causes which have lead to it.

When your Honor undertook to remove four of the members of the Board of Health for declaring the existence of cases of bubonic plague in this city and taking precautions to prevent the spread thereof, the attention of the sanitary officers of the various states of the Union was immediately attracted to this point. They knew from the unimpeachable testimony of a commission of eminent specialists appointed by the President of the United States, that sporadic cases of plague were occurring in San Francisco. The newspapers of this city had devoted a vast amount of space to a widespread denouncement of the presence of the disease, and a vicious abuse of its discoverers, but there is no reason to believe that Eastern health officers were unduly alarmed at the presence of the disease, knowing that ample safeguards exist in modern science, and that every precaution was being taken until it became evident that the Mayor of this city, by removing from office men who realized the situation, and were capable of coping with it, intended to stop precautionary measures. For it was evident that one who did not believe in the existence of the disease would not bend his energies to preventing its spread. Throughout the East there naturally existed a belief that if a deadly contagious disease were allowed to secure a foothold on the threshold of the country, it would not be long before interior states would be seriously menaced. It did not require the intellect of genius to perceive that disease could not be trifled with. State Boards of Health in every part of the Union adopted resolutions condemning your Honor's action, and expressing fears of its consequences. With one voice they demanded an early conference with the head of the Public Health Service in Washington. Their request was granted, and on Jan. 19, 1903, the representatives of twenty-one State Boards of Health met in the office of the Surgeon-general of the Public Health and Marine Hospital Service at Washington, D. C., to consider the plague situation at San Francisco. Prior to the date of meeting, Surgeon-General Wyman had visited this city in which the Marine Hospital Service had maintained a plague laboratory since April 8, 1901. He conferred with the health officers of the state and city, and according to his solemn statement to the assembled health officers of the United States: "Mayor Schmitz admitted to me in the presence of a witness the disease was plague and though he pointed out that he was not in harmony with the City Board of Health, he would nevertheless do everything possible to rid Chinatown of that disease and would give his best efforts in that direction." (Supplement Public Health Reports, Jan. 23, 1903, page 6, line 20 to 35 inclusive.) Assurances of support and assistance in sanitary measures in the Chinese district were likewise given by Governor-elect Pardee to the Surgeon-General and through Dr. M. Gardner, representing California State Board of Health, to the conference.

The following resolutions, copy of which are enclosed and marked exhibit "A," were adopted by the conference. Your Honor will perceive upon reference to them that the presence of plague in California is declared to be established beyond debate, and the city and state were called upon to take certain percautions, and the state there pledged itself so to do. The conference declares that it "regards the habitual publication of the actual facts relative to infectious disease and preventive procedures as the surest route to popular confidence." This recommendation your Honor has not permitted us to follow, and so far as its consequences may effect this city you alone must be responsible. It is further declared with reference to plague infection that "the gravity of this circumstance is greatly increased . . . by the failure of the city government of San Francisco to support its City Board of Health and by the obstacles opposed to the operation of the United States Public Health Service." Fortunately for this city the Board of Supervisors have given to this department a cordial and earnest support, supplying the funds necessary for the continuation of the work in the Chinese district, the absence of which are as much of an obstacle to the work of the Marine Hospital Service as to ourselves. You have declined to sign bills appropriating money for this work and they have become laws without your sanction. You have made statements to foreign consuls for which there was no authority in the health records of this city, and you have done so with reports of the Marine Hospital Service officials in your possession, which contradicted statements you have made. The situation is too serious to be disregarded. The State Board of Health, the City Board of Health and the Marine Hospital Service in friendly and faithful cooperation are laboring under the watchful eye of the health officers of this country to protect this city from the baneful effects of your Honor's short-sighted policy. Our language is plain, because the occasion demands that its meaning shall be unmistakable. The Governor of this state has given its promise to its sister states, this city has pledged its faith to its state and the authorities of the federal government and in reciprocal confidence, under the agreement, Feb. 9th, this year, they have given their words each to the other that the work required by the conference of State Boards of Health shall be done. That work is progressing satisfactorily. The confidence of eastern health authorities, expressed by resolution in the four members of this Board whom your Honor sought to eject, has been extended to the new State Board of Health. The indefatigable officers of the Public Health Service have given the most valuable advice and direction, and through their journal have informed the anxious East of the progress of our work. Throughout the Chinese district the result of our joint labors is visible to the most superficial observer, and at the June conference of State Boards of Health cordial satisfaction was expressed at our progress along the agreed line of sanitary improvement. To-day your Honor represents the only obstacle to complete success. Your actions alone arouse and maintain the watchful distrust of our observant critics. Your hasty and unfounded statements resulted in the withdrawal of the Consular representative of Ecuador from this city, and caused that republic to quarantine this state in the belief that we were wilfully deceiving it concerning the local situation. We submit, sir, the question is no longer whether or not you believe in the existence of a fact which the most searching enquiry of the highest scientific authority has removed from the jurisdiction of journalistic bacteriologists, medical montebanks and laymen with a smattering of medical information; we are no longer debating, we are acting. We face a condition, not a theory. We must satisfy a critical and observant audience, motived by self-protection, that we are using every precaution that money can buy and science suggest to eliminate a determined diseased condition that menaces the health of our city and the reputation of our state. Your assistance, sir, will be a valuable aid, but if you continue to refuse it the work must be completed as it has been undertaken and maintained in spite of your resistance. In the protection of the interests of this city and state, in fulfilment of its solemn pledge this Board or the majority of it will bend every energy to accomplish the task it has undertaken, and we solemnly declare that upon your Honor must fall the serious responsibility of answering to this city and state for the continuation of a policy of evasion, suppression and denial of established facts and antagonism to solemn agreements between the city and state that threaten the material elements of our prosperity as seriously as it has menaced the moral interests of this community.

CONFERENCE, STATE AND PROVINCIAL BOARDS OF HEALTH OF NORTH AMERICA, OFFICE OF THE SECRETARY.

Providence, R. I., Jan. 27, 1903.

City Board of Health, San Francisco, Cal.—Gentlemen: As secretary of the conference called by Surgeon-General Wyman, of twenty-one states and territories, to consider the question of bubonic plague as it has existed in San Francisco, I was directed to forward to your Board a copy of the resolutions passed by this conference, and to politely and earnestly request that you may give this conference, at as early a date a possible, the plans which it may be your intention to adopt for the control of the plague in San Francisco.

Permit me to state that this request is not in the nature of a demand, but for the purpose of assuring the several states represented that some official action is being taken.

Yours truly,

Gardner T. Swarts, Secretary.

RESOLUTIONS PASSED BY THE CONFERENCE.

The presence of plague in California is established beyond debate by—

I

1. The investigations of Kellogg of the San Francisco Board of Health, Ryfkogel of the California State Board of Health, and Kinyoun for the United States Marine Hospital Service.

2. By the later investigations by Pillsbury for the State Board of Health, and by those of J. H. White, M. White, Flint, Currie, Carmichael, Blue, and Glennan for the United States Marine Hospital Service.

3. By the findings of Flexnor, Barker, and Novy, comprising a special committee acting under federal authority.

4. By the findings of independent and disinterested investigators (supplied with materials from autopsies made at San Francisco and working in San Francisco, Chicago, Boston, New York, Washington, Baltimore, Philadelphia, and Ann Arbor).

5. By the occurrence of a case of human plague in Ann Arbor due to an accident in the manufacture of Haffkine's prophylactic fluid with a culture of plague bacillus obtained in California.

6. By the autopsy records of ninety cases of plague, now in the possession of the United States Marine Hospital Service and of the San Francisco Board of Health, and published in part in the "Occidental Medical Times," San Francisco.

II

The presence of plague in any community where proper restrictions are not taken to prevent its spread is an injury to the best interests of that community. Such injury is in any case avoidable by the proper co-operation of all interests involved, commercial, professional, and governmental. This conference regards the habitual publication of the actual facts relative to infectious disease and preventive procedures as the surest route to public confidence, and is one of the means best adapted to minimize the injury liable to result from the presence of such diseases.

III

The present danger to California and to the United States lies primarily in the persistence, during nearly three years, of a definite nidus of plague infection in that part of San Francisco known as Chinatown; but the gravity of this circumstance is greatly increased by the gross neglect of official duty by the State Board of Health of California and the obstructive influence of the recent Governor of California, by the failure of the City Government of San Francisco to support its City Board of Health, and by the obstacles opposed to the operations of the United States Public Health Service.

IV

The conference will consider the safety of the country sufficiently assured as soon as satisfied that a competent City Board of Health of San Francisco, and a competent State Board of Health, in co-operation with the United States Public Health Service, will proceed under definite, harmonious, and effective laws and ordinances; that they are provided with ample funds, and that they are jointly and severally in the free exercise of their lawful powers.

V

The conference expresses its conviction that the United States Public Health Service has deserved well of the State of California and of the country, and that it would go far toward the restoration of popular confidence if the United States Public Health officials were admitted to the same relations with the State Board of Health as have been steadily maintained with the City Board of Health of San Francisco.

The praise of this conference and the gratitude of the city of San Francisco are due to Drs. John M. Williamson, Vincent P. Buckley, W. B. Lewitt, Rudolph W. Baum, Louis Bazett, and Dr. M'Carthy of the City Board of Health of San Francisco.

VI

Resolved, That the Surgeon-General of the Public Health and Marine Hospital Service be requested to inform the various State Boards of Health at least two weeks before the annual meeting of the Public Health and Marine Hospital Service and the State Boards of Health to what extent the sanitary recommendations this day made to control and prevent the existence of plague in California have been carried out, to the end that they may then be prepared to take further action that may be necessary to accomplish the end desired.

Attest:
Gardner T. Swarts,
Secretary of Conference.

THE LIVER REFLEX.

By Albert Abrams, A. M., M. D., San Francisco.

Reference to this phenomenon is here made for the first time, although the subject will be dealt with more elaborately in a forthcoming book now in the press, entitled, "Splanchnic Neurasthenia." The writer has elsewhere referred to a series of visceral reflexes, notably the heart reflex and the lung reflexes of dilation and contraction.

All these reflexes are of great clinical importance and, in a therapeutic sense, serve to explain the beneficial action of electro and hydrotherapy as well as other procedures applied to the skin for remedial purposes. The reflexes in question give objective demonstration of how agents acting on the skin reflexly stimulate nutrition of the organs. The liver reflex is elicited by irritating the skin contiguous to the lower liver border. The irritant may be a spray of ether, scratching of the skin with the finger-nail or the blunt end of a pencil. Subsequent to any of these maneuvers, the lower liver border may be observed by percussion to recede a half inch or more, depending on the degree of irritation. The sinusoidal current acts more efficiently in this regard than any irritant causing the lower liver border to recede. This retraction of the lower liver border is dependent entirely on contractibility of the liver itself and is effected by contraction of the muscular fibers contained in the fibrous coat of the liver, which, as is known, invests the entire gland, and at the transverse fissure this coat turns into the substance of the liver with the branches of the portal vein. The size of the liver may also be influenced by what I have called the cardio-splanchnic phenomenon. This phenomenon will be described in a future number of the "American Journal of the Medical Sciences." To properly elicit and recognize the liver reflex, it is necessary to correctly percuss the lower border of the liver. Percussion of the latter practiced after the conventional manner is attended by insurmountable difficulties, and this is not difficult to understand, considering the fact that the edge of the liver does not exceed one centimeter in thickness and that it is practically immersed in an atmosphere of tympanitic sound. The contiguous viscera, stomach, and intestines vary in their degree of inflation and in the character of their contents, and we have additional factors which modify the accuracy of our percussional results. Posture and the phases of respiration are likewise disturbing elements. A liver may be very much enlarged, yet percussion as ordinarily practiced may give absolutely no evidence of enlargement. If examination is made in the recumbent posture it is wise never to declare the liver to be enlarged unless it is palpable; but palpation may detect a liver which is dislocated though not necessarily enlarged; and again, rigidity of the abdominal parietes may negative the value of palpation.

A simple method for defining the lower liver border by percussion on the surface of the abdomen is as follows: The patient is instructed to incline his body backward as far as possible, and, to relieve the tedium of the posture, the body is supported by means of the hands resting on the hips. If percussion, which must be light, is now attempted the difficulty of determining the lower hepatic border is reduced to a minimum. If an analysis of this maneuver is attempted we find that it involves a simple law in physics, viz.: that sound waves are best conducted by the medium in which they are produced. If the sound waves are compelled to transverse media of different density, some of the waves will be lost by reflection and the sound becomes correspondingly enfeebled. Solid bodies conduct sound better than air. If percussion of the lower liver border is extended in the conventional manner, the percussion sound first passes through the relatively dense abdominal musculature and then through the air containing viscera before it reaches the liver. Theoretically at least, the percussion sound becomes enfeebled by the time it reaches the liver, inasmuch as the high pitch which reveals anything solid is dependent on the loudness of the percussion note, which in turn depends on its force exerted in percussion. We dare not employ a strong percussion sound in mapping out the hepatic border, for, by so doing, we set in vibration the air contained in the neighboring viscera and defect the original object of our percussion, viz.: the elicitation of a dull sound. In the postures which I suggest, the liver surface is approximated to the abdominal wall, thus affording a like medium for the transmission of the percussion sound. When patients are compelled to assume a recumbent posture the same object may, to a certain extent, be achieved by directing them to forcibly contract the abdominal muscles during the period percussion is executed. When elicitation of the liver reflex is attempted, the lower liver border must first be determined by percussion after the method here described, and having been determined and marked, the skin is irritated when percussion is again attempted with the body of the patient inclined backward; the degree of the liver recession is noted and marked by a dermograph. The reflex, while of short duration, lasts longer than the heart reflex. It may be mentioned, parenthetically, that there is one condition which demands consideration in percussion of the lower liver border and that is the presence of fecal concretions in the intestines contiguous to the liver border. The observation is no doubt correct, that one should not rely on the results of liver percussion unless the bowels have been previously cleared by free purgation. This doctrine applies with all cogency

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*The practical value of this reflex in diagnosis and treatment of cardiac affections has been firmly established by the recent investigations of Merklen and Heitz in a paper before the "Societe Medicale des hospitaux on La Reflexe Cardiague d' Abrams" (La Presse Medicale, Aug. 1, 1903).

to the entire abdomen. Experience has taught me the following simple expedient of eliciting the presence of fecal matter. If, by percussion or palpation, fecal stasis is suspected, massage of the suspected area for a few seconds will dissipate the dull percussion sound which will then be supplanted by a tympanitic percussion tone. It is therefore imperative, before determining the lower hepatic border by the method already described, to massage that region for several seconds.

Two additional facts deserve mention. 1. The patient must be instructed to take no inspiration while the body is inclined backward and during the time light percussion is executed, otherwise there will be a downward respiratory dislocation of the liver. 2. In practicing percussion, the finger receiving the percussion blow must be firmly imbedded in the abdominal wall; otherwise the blow will not be directly transmitted to the liver. The reflex in question, like the other visceral reflexes, is of more than mere theoretic interest. The recognition and acceptance of the liver reflex may be utilized in a diagnostic, prognostic, and therapeutic direction. A liver enlarged from active or passive congestion is specially susceptible to contraction through cutaneous irritation, hence the liver reflex, in hepatic enlargement dependent on congestion, is correspondingly pronounced. If, on the other hand, the cause of hepatic enlargement is dependent on connective tissue hyperplasia, the liver reflex will be found to be absent or present to a small degree only. Prognosis may be influenced in the same directions. Therapeutically the size and nutrition of the liver may be frequently influenced, reflexly by innumerable nerves which terminate in the skin. In this regard no physical method of treatment in my experience can equal the action of the sinusoidal current. There are various forms of this apparatus, but the only correct one is that invented by Dr. Kennelly, which is designed to secure a true sine curve, a constant field, and an increase of the alternations sufficient to obtain anesthetic effects. It is now improved so that one may obtain a frequency up to 150,000 alternations per minute.

CASE OF POISONING BY CARBON MONOXIDE.

By KATE P. VAN ORDEN, Alameda, Cal.

Read Before the Saturday Night Club, August, 1903.

On Sunday, May 3d, at eight o'clock in the morning I was hastily summoned to a young woman who had just been found unconscious in a room filled with illuminating gas from a burner which was supposed to have been turned on all night. Two canary birds in the room on a level three feet higher than the girl's bed were stiff and cold. The girl was breathing regularly but stertorously, was pale and cyanotic and had a slow, soft pulse, regular and 50 to the minute. The mattress and floor beneath the bed were saturated with urine. She was taken at once to another room by a wide open window. The administration of oxygen was begun at once, alternating with inhalations of ammonia fortier. Gave also 1-30 strychnia, 1-50 nitroglycerin and 1-20 morphin hypodermically and the oxygen and ammonia. Oxygen was given with only short intermissions for two hours without improvement in the patient's condition or color. I then opened the median basilic vein and withdrew twenty-four ounces of blood and introduced a pint of normal salt solution into each thigh and another pint into the breasts. The color improved at once and the patient began respiring freely. Profound coma continued and all reflexes were abolished. Oxygen was continued through the night and ten grains of ammonium carbonate dissolved in four ounces of water was administered per orem every hour. At midnight temperature was 100°, pulse 70, respiration 16. Although the coma was so profound that there was no reaction when the cornea was touched and no contraction of the widely dilated pupils when a lighted candle was held close to the eyes, yet when liquid was introduced into the mouth a teaspoonful at a time and allowed to flow back to the throat, swallowing occurred without interruption and without strangling at any time, so that the whole four ounces were given teaspoonful after teaspoonful and was promptly swallowed. On Monday morning twenty-four hours after my first visit, temperature was 98.6° pulse 76, respiration 18. Coma still profound, but color good. There was incontinence of urine and frequent emissions of large quantities of gas from the bowels. Discontinued oxygen, continued ammonia carbonate ten grains every two hours and gave an ounce of black coffee every four hours. Gave two grains of calomel in divided doses to be followed in eight hours with an ounce of sulphate of magnesia. Gave also four ounces of milk every three hours; saw the patient about once in six hours, and tried each visit by means of flipping the face with ice water cloths, vigorous friction over the chest, pinching the external and posterior surface of the arms to elicit some muscular retraction but was unsuccessful until forty-eight hours had passed, when either of the two last-named procedures caused her to wrinkle her forehead. At this time the pupils showed slight retraction to light, and soon after she became restless at times, throwing her arms about, doubtless owing to the discomfort caused by the salts, for a copious involuntary evacuation of the bowels occurred. At the end of seventy-two hours we thought the patient tried to reply when her name was repeatedly called, and at the end of 100 hours she responded to the reiterated command "put out your tongue," but even then she had to be commanded to put it in again. In six hours more she opened her eyes, and upon being questioned as to the color of objects near her she framed the reply correctly with her lips but made no sound. She was raised in bed and urged to drink her milk, which she did, but for twenty-four hours longer she had to be told to swallow or to chew, the mere holding of the glass to her lips or the presence of food in her mouth did not excite the usual muscular effort. The ammonia was now discontinued and she was given strychnia arsenate gr. 1-30 every three hours. By the fifth day she could put her hands to her head and could speak aloud, though with difficulty. On the eighth day she could turn over in bed, and the day following she was put upon her feet and encouraged to walk. She could not support her weight nor move her feet. On the thirteenth day, being supported on each side, she could move one foot after the other, but invariably put one foot down on the toes of the other foot. This continued for four days with slight improvement, and the discharge of urine and feces was still without control. At the end of a fortnight from the date of her asphyxiation she could walk by holding to the bedstead or chair, if she were put upon her feet and kept from falling backward. At the end of three weeks she could control her bladder during the day but not always at night and had only occasional lapses in control of bowel movements. Her mind was clear, and though her standing posture was still with the pelvis thrown forward, she could walk rapidly and could run a little. I did not see her again for two months, when she was in excellent health and reported her school-room work to be much better than before her illness. Her friends consider her recovery perfect. The case was an interesting one to me, first, because of the long continued coma; second, the paretic condition which succeeded; and third, the entire mental and physical recovery, due, I think, largely to dilution of the poison by the blood-letting and saline infusion. The literature at my command contained very scanty details as to course of recovery and was somewhat discouraging as to the degree of recovery in carbon monoxide asphyxiation, so that I have thought the case of sufficient interest to warrant this presentation of it. The only detailed report of a case which I found was in the "Lancet" for 1896, Vol. 1, in which bleeding and transfusion are referred to but were not used in the case, and dementia followed recovery from the symptoms produced by the asphyxiation. As we all know, the function of the hemoglobin is to carry oxygen from the lungs to the tissues, which it does by virtue of its capacity to become oxidized in the lungs and deoxidized in the capillary circulation. Carbon monoxide combines chemically with hemoglobin to form a more stable compound than oxyhemoglobin, and hence by preventing the absorption of oxygen in the lungs it produces what may be termed a circulatory asphyxia, and the respiratory function of the hemoglobin so combined is permanently destroyed. Hence the abstractions of the blood containing this noxious compound and the introduction of the normal salt solution as a diluent for what must remain seems a most rational procedure.

THE MYSTERIES OF PLAGUE, PAST AND PRESENT.

By C. N. Ellinwood, M. D., Professor of Physiology, Cooper Medical College.

"A quarry largely exploited by the poets, but still unexhausted." *Plutarch's Dialogues on the Cessation of Oracles.*

In the seven books of Paulus Aegineta, translated from the Greek, and embracing a complete view of the knowledge possessed by the Greeks, Romans, and Arabians of all subjects connected with medicine and surgery, is found this exposition of the beliefs and teachings of the ancients on the subject of plague:—

1. The description of the disease by the Greek historian Thucydides, an illustrious general, orator, statesman, and philosopher, who suffered from an attack of the disease in his own person, in the historical epidemic of Athens, 430 B. C. The more prominent symptoms mentioned by him are strong heat in the head, redness and inflammation of the eyes, the mouth and internal fauces turgid with blood, breath fetid, sneezing, hoarseness, and afterwards violent cough, vomiting of bile, retching, and convulsions. The heat of the skin not much increased, but the internal parts glowing with heat; the skin reddish or livid, and covered with minute phlyctenæ and ulcers; despondency, restlessness, and intense thirst, and toward the conclusion, diarrhea, ulceration of the bow-

els, and various symptoms of putrefaction. Those who survived the febrile attack were subject to blindness and fatuity and mortification of the testicles and extremities. The disease generally proved fatal on the seventh or ninth day. This description of plague by the careful, painstaking historian, which has gone into medical literature as authentic, is remarkable for the absence of any sign or symptom by which the disease known as plague to-day can be recognized.

Galen, in his commentary on Hippocrates, says by the plague is to be understood an epidemical fever of a fatal nature. Hippocrates has related several histories of diseases which came under this description in his "Epidemics," but they present such variety of symptoms that we can not undertake to give their general characters. It is deserving of remark, however, that he several times makes mention of fevers accompanied by bubos. According to M. Littre, bubos are noticed among the symptoms of plague by Ruffus, and also by Dioscorides and Posidonius, and further there are found by commentators several passages from ancient authors, in which pestilential bubos are incidentally mentioned, but they are insufficient for illustrating the ancient history of glandular plague. It is greatly to be regretted that Galen has given us no description of the dreadful plague which prevailed in his time. It appears that he fled from Rome for fear of infection. He alludes to it, indeed, in several parts of his work, but in very brief terms, only mentioning that it put on the appearance of dysentery; and in one place he strongly commends the celebrated theriac as a most efficacious remedy for the prevention and cure of pestilential disorders, and elsewhere he speaks favorably of the Armenian bole.

We shall give a brief abstract of Procopius' description of the dreadful plague which desolated the Roman Empire in the reign of Justinian. Its usual precursors were certain delirious fantasies and disturbed dreams, after which the fever made its attack suddenly. The early symptoms, however, were not well marked, for there was neither increased heat nor discoloration of the skin, nor did the patient apprehend danger. Generally on the first or second day, but in a few instances somewhat later, bubos appeared not only in the groin, but also in the armpits and below the ears. Some were affected with deep coma and others with wild delirium. Some died from sphacelus of the bubos, which, when inspected by the physicians after death, presented the appearance of a coal or carbuncle (anthrax). Some died at the commencement, and others after the lapse of several days. In certain cases the skin was covered over with black phlyctenæ of the size of a lentil, which were usually succeeded by sudden death. Others were unexpectedly cut off by a discharge of blood. To women in the puerperal state it proved particularly fatal. When the bubos came to a proper suppuration, they generally proved a favorable crisis; but when they did not suppurate, they were commonly followed by a wasting of the thigh. One of the common consequences of the fever was an affection of the organs of speech. All the usual prognostics proved fallacious, and the effects of the common remedies were uncertain. In some cases the bath proved beneficial, and in others it had a contrary effect. At one time the amount of deaths in Constantinople ranged from five to ten thousand each day. (De Bello Pers. 22, 23.) This pestilence is described likewise by Agathias (v) and by Evagrius (Hist. Eccles. iv, 29). It resembled the plague of Avignon, described by Guy of Chauliac.

The belief that the plague is preceded by extraordinary phenomena in the earth and sky is very ancient. Thucydides concludes his brief account of the last attack of the plague on Athens with the remark that at that time there were many earthquakes at Athens and other places. Manilius says such plagues as that of Athens are commonly prognosticated by comets and other celestial fires. Diodorus Siculus mentions that the Athenian plague was preceded by earthquakes of extraordinary severity.

The earlier ancient authors appear to have entertained no suspicions of contagion as a cause of febrile or of other complaints. Homer, as formerly stated, evidently refers the origin of the plague which prevailed in the Grecian army during the siege of Troy to the heat of the sun. The works of the fathers of history and of medicine have likewise been ransacked in vain for any traces of the doctrine of contagion. Thucydides, therefore, appears to be the first author (if we except the Mosaic description of leprosy) who makes any positive allusion to the contagious nature of diseases. From his description of the plague of Athens, there can be no doubt that he wishes it to be understood that the disease was transmitted from one person to another, for he mentions that physicians were more attacked by it than any others, as having most intercourse with the sick; and he afterwards describes the terror which the citizens felt to approach those laboring under the disease, and intimates that it was often contracted by such intercourse.

From "Hecker's Epidemics of the Middle Ages" the following account of the plague, or "black death," with symptoms in detail, is plainly told: The disease. The most memorable example of what has been advanced is afforded by a great pestilence of the fourteenth century, which desolated Asia, Europe, and Africa, and of which the people yet preserve the remembrance in gloomy traditions. It was an oriental plague, marked by inflammatory boils and tumors of the glands, such as break out in no other febrile disease. On account of these inflammatory boils, and from black spots, indicatory of a putrid decomposition, which appeared upon the skin, it was called in Germany and in the northern kingdoms of Europe the black death, and in Italy, la Mortalega Grande, the great mortality. Few testimonies are presented to us respecting its symptoms and its course, yet these are sufficient to throw light upon the form of the malady, and they are worthy of credence, from their coincidence with the signs of the same disease in modern times. The imperial writer Kantakusenos, whose own son Andronikus died of this plague in Constantinople, notices great imposthumes of the thighs and arms of those affected, which, when opened, afforded relief by the discharge of an offensive matter. Bubos, which are the infallible signs of the oriental plague, are thus plainly indicated, for he makes separate mention of smaller boils on the arms and in the face, as also in other parts of the body, and clearly distinguishes these from the blisters, which are no less produced by plague in all its forms. In many cases black spots broke out all over the body, either single or united and confluent. These symptoms were not found in every case. In many, one alone was sufficient to cause death, while some patients recovered, contrary to expectation, though afflicted with all. Symptoms of cephalic affection were frequent; many patients became stupefied and fell into a deep sleep, losing also their speech from palsy of the tongue; others remained sleepless and without rest. The fauces and tongue were black, and as if suffused with blood; no beverage would assuage their burning thirst, so that their sufferings continued without alleviation until terminated by death, which many in their despair accelerated with their own hands. Contagion was evident, for attendants caught the disease of their relations and friends, and many houses in the capital were bereft even of their last inhabitant. Thus far the ordinary circumstances only of the oriental plague occurred. Still deeper sufferings, however, were connected with this pestilence, such as have not been felt at other times; the organs of respiration were seized with a putrid inflammation; a violent pain in the chest attacked the patient; blood was expectorated, and the breath diffused a pestiferous odor. In the West the following were the predominating symptoms on the eruption of this disease: An ardent fever, accompanied by an evacuation of blood, proved fatal in the first three days. It appears that bubos and inflammatory boils did not at first come out at all, but that the disease, in the form of carbuncular (anthraxartigen) affection of the lungs, effected the destruction of life before the other symptoms were developed. Thus did the plague rage in Avignon for six or eight weeks, and the pestilential breath of the sick, who expectorated blood, caused a terrible contagion far and near; for even the vicinity of those who had fallen ill of plague was certain death; so that parents abandoned their infected children, and all the ties of kindred were dissolved. After this period, bubos in the axilla and in the groin, and inflammatory boils all over the body, made their appearance; but it was not until seven months afterwards that some patients recovered with matured bubos as in the ordinary milder form of plague. Such is the report of the courageous Guy de Chauliac, who vindicated the honor of medicine by bidding defiance to danger, boldly and constantly assisting the affected, and disdaining the excuse of his colleagues, who held the Arabian notion that medical aid was unavailing, and that the contagion justified flight. He saw the plague twice in Avignon, first in the year 1348, from January to August, and then twelve years later, in the autumn, when it returned from Germany, and for nine months spread general distress and terror. The first time it raged chiefly among the poor, but in the year 1360 more among the higher classes. It now also destroyed a great many children, whom it had formerly spared, and but few women. The like was seen in Egypt. Here also inflammation of the lungs was predominant, and destroyed quickly and infallibly, with burning heat and expectoration of blood. Here, too, the breath of the sick spread a deadly contagion, and human aid was as vain as it was destructive to those who approached the infected. Boccaccio, who was an eye-witness of its incredible fatality in Florence, the seat of the revival of science, gives a more lively description of the attack of the disease than his non-medical contemporaries. It commenced here, not as in the East, with bleeding at the nose, a sure sign of inevitable death; but there took place at the beginning, both in men and women, tumors in the groin and in the axilla, varying in circumference up to the size of an apple or an egg, and called by the people pest-boils (gavoccioli). Then there appeared similar tumors indiscriminately over all parts of the body, and black or blue spots came out on the arms or thighs, or on other parts, either single, or large, or small and thickly studded. These spots proved equally fatal with the pest-boils, which had been from the first regarded as a sure sign of death. No power of medicine brought relief; almost all died within the first three days, some sooner, some later, after the appearance of these signs, and for the most part entirely without fever or other symptoms. The plague spread itself with the greater fury, as it communicated from the sick to the healthy, like fire among dry and oily fuel, and even contact with the clothes and other articles which had been used by the infected seemed to induce the disease. As it advanced, not only men, but animals. fell sick and shortly expired, if they had touched things belonging to the diseased or dead. Thus Boccaicco himself saw two hogs on the rags of a person who had died of plague, after staggering about for a short time, fall down dead, as if they had taken poison. In other places multitudes of dogs, cats, fowls, and other animals fell victims to the contagion; and it is to be presumed that other epizoötes among animals likewise took place, although ignorant writers of the fourteenth century are silent on this point. In Germany there was a repetition in every respect of the same phenomena. The infallible signs of the oriental bubo-plague, with its inevitable contagion, were found there as everywhere else; but the mortality was not nearly so great as in other parts of Europe. The accounts do not all make mention of the spitting of blood, the diagnostic symptom of this fatal pestilence; we are not, however, thence to conclude that there was any considerable mitigation or modification of the disease, for we must not only take into account the defectiveness of the chronicles, but that isolated testimonies are often contradicted by many others. Thus the chronicles of Strasburg, which only take notice of boils and glandular swellings in the axillæ and groins, are opposed by another account, according to which the mortal spitting of blood was met with in Germany; but this again is rendered suspicious, as the narrator postpones the death of those who were thus affected to the sixth and (even the) eighth day, whereas no other author sanctions so long a course of the disease; and even in Strasburg, where a mitigation of the plague may with most probability be assumed, since in the year 1349 only 16,000 people were carried off, the generality expired by the third or fourth day. In Austria, and especially in Vienna, the plague was fully as malignant as anywhere, so that the patients who had red spots and black boils, as well as those afflicted with tumid glands, died about the third day; and lastly, very frequent sudden deaths occurred on the coasts of the North Sea and in Westphalia, without any further development of the malady. To France this plague came in a northern direction from Avignon, and was there more destructive than in Germany, so that in many places not more than two in twenty of the inhabitants survived. Many were struck, as if by lightning, and died on the spot, and this more frequently among the young and strong than the old; patients with enlarged glands in the axillæ and groins scarcely survived two or three days; and no sooner did these fatal signs appear than they bid adieu to the world, and sought consolation only in the absolution which Pope Clement VI promised them in the hour of death. In England the malady appeared, as at Avignon, with spitting of blood, and with the same fatality, so that the sick who were afflicted either with this symptom or with vomiting of blood died in some cases immediately, in others within twelve hours, or, at the latest, in two days. The inflammatory boils and bubos in the groins and axillæ were recognized at once as prognosticating a fatal issue, and those were past all hope of recovery in whom they arose in numbers all over the body. It was not till towards the close of the plague that they ventured to open, by incision, these hard and dry boils, when matter flowed from them in small quantity, and thus, by compelling nature to a critical suppuration, many patients were saved. Every spot which the sick had touched, their breath, their clothes, spread contagion; and, as in all other places, the attendants and friends, who were either blind to their danger or heroically despised it, fell a sacrifice to their sympathy. Even the eyes of the patient were considered as sources of contagion, which had the power of acting at a distance, whether on account of their unwonted luster or the distortion which they always suffer in plague, or whether in conformity with an ancient notion, according to which the sight was considered as the bearer of a demoniacal enchantment. Flight from infected cities seldom availed the fearful, for the germ of the disease adhered to them, and they fell sick, remote from assistance, in the solitude of their country houses. Thus did the plague spread over England with unexampled rapidity, after it had first broken out in the county of Dorset, whence it advanced through the counties of Devon and Somerset to Bristol, and thence reached Gloucester, Oxford, and London. Probably few places escaped, perhaps not any, for the annals of contemporaries report that throughout the land only a tenth part of the inhabitants remained alive. From England the contagion was carried by a ship to Bergen, the capital of Norway, where the plague then broke out in its most frightful form, with vomiting of blood, and throughout the whole country spared not more than a third of the inhabitants. The sailors found no refuge in their ships, and vessels were often seen driving about on the ocean, and drifting on shore, whose crews had perished to the last man. In Poland the infected were attacked with spitting of blood, and died in a few days in such vast numbers that, as it has been affirmed, scarcely a fourth of the inhabitants were left. Finally in Russia the plague appeared, two years later than in Southern Europe, yet here again with the same symptoms as elsewhere. Russian contemporaries have recorded that it began with rigor, heat, and darting pain in the shoulders and back; that it was accompanied by spitting of blood, and terminated fatally in two or at most three days. It is not till the year 1360 that we find bubos mentioned as occurring in the neck, in the axillæ, and in the groins, which are stated to have broken out when the spitting of blood had continued some time. According to the experience of Western Europe, however, it can not be assumed that these symptoms did not appear at an earlier period. Thus much from authentic sources on the nature of the "black death." The descriptions which have been communicated contain, with a few unimportant exceptions, all the symptoms of the oriental plague which have been observed in more modern times. No doubt can obtain on this point. The facts are placed clearly before our eyes. The histories of the great plague epidemic here detailed or referred to have as a rule been preceded by or accompanied with some convulsion of nature, earthquakes, floods, wars, and the like causes of famine, national gloom, and physical weakness or decay among the vast multitude of men. Under such conditions it is that epidemics and contagion find ready victims to prey upon; find the soil ready, best cultivated for their pestiferous growth and lethal consequences. It is apparently due to the improved conditions of man upon the earth to-day, his progress in knowledge advancing him above national want, and public calamities of starvation, depression, filth, and idleness, that we find epidemic and contagion less fatal, almost non-recognizable, if we rely upon the symptoms, etiology, and clinical pictures handed down to us from ancient and medieval times. Certain it is that we never have in modern times such terribly fatal epidemics as oriental plague, which, history tells us, attacked the populous cities of Athens and London, respecting not races nor conditions of men, but mowing them down by many thousands, and in a single day. Its causal entity was a mystery, its mode of dissemination unknown and beyond control; only its course, its terror, and its fatality were recognized.

In the past decade, since the bubonic plague has been exploited by bacteriology and the causal entity of the disease has come to be generally recognized, there have been developed epidemic centers or foci of plague in many parts of the world, and so the disease has come to be studied by many different observers, and under different conditions; but we are all indebted to Japan for the discovery of the bacilli pesti, and the further knowledge that rats and other rodents furnished the means for perpetuating and disseminating the germ. Among the ancients, of course, they had no means of diagnosis but symptoms and results, and so differences in the descriptions of epidemics in different parts of the world and at different times led to divergent beliefs and irreconcilable teachings, yet unexplained.

To-day the causal entity, the bacillus pestis, being universally relied upon as the diagnostic factor of the disease, there remains yet the mystery to be explained that the disease runs such a different course in different countries, never that virulent contagion of history, somewhat contagious in one country at one time and at another time and place not contagious, or only slightly or questionably so. It would seem, then, that there remains much to be discovered of the exact science of this great destroyer of mankind before the fatal mystery can be revealed. If it be true, as the Japanese observers teach, that rats and such rodents are the essential factors in the propagation and dissemination of the disease to man, and their facts seem to warrant that conclusion, then there should be a universal system adopted in all countries and by all authorities for the complete destruction of such animals; and it is to be hoped that science may be again crowned with the beneficent achievement of freeing mankind from the ancient and modern scourge.

DEPARTMENTS

DISEASES OF CHEST.

By Albert Abrams, M. D.

Therapeutic and Diagnostic Value of Tuberculin.—R. Adler scouts the idea that a sanatorium constitutes the solution of the problem of curing tuberculosis. Statistics culled from a number of observers demonstrate that sanatorium treatment does not cure more than 25 per cent of the mildest cases. Cure in such instances is based on the fact that there is no reaction to tuberculin. At present thirty-nine sanatoria are in operation in Germany, nineteen in the course of construction, and sixteen projected. Reiche demonstrated that 60 per cent of the patients discharged from a sanatorium without objective pulmonary signs showed a relapse of the physical signs within a year. Others, notably Hammer, conclude that the results of treatment in a sanatorium yielded no better results than the ambulant treatment. Reiche concedes that treatment in special institutions offers some advantages, notably in the direction of improved and correct methods of living. Koch's tuberculin first introduced thirteen years ago is now, relatively speaking, but little used by physicians. Adler employs tuberculin for diagnostic and therapeutic purposes. Only patients without pyrexia should be treated with tuberculin. If fever is present, it must first be subdued by rest in bed, cold frictions, etc. The initial dose varies with the individual. As a rule, .00005 g. of Koch's old tuberculin should be begun with. Those inexperienced with its use should employ not more than .00001 g. as the initial dose. Injections are repeated once a week, and after four or five weeks the dose is gradually increased, provided the reaction does not exceed a few tenths of a degree after each injection, and, furthermore, if headache, malaise, and other constitutional effects do not supervene. When a definite dose induces constitutional disturbances, it must be repeated until the susceptibility is no longer manifest. The dose, if increased, should, as a rule, be only .00001 g. each time, and the maximum dose is 1 gram, which is repeated until cure is established. The local reaction diminishes with repetition of the injection. The author made the injections during his office hours, and the patients were instructed to return home at once and remain in bed the following day. Each patient was provided with a book for recording the date and number of the injections, weekly weight, and a record of the temperature taken from three to five times daily. When tolerance was established by the proper dose, improvement began. The writer contends that, if tuberculin is properly administered, it constitutes the most trustworthy and convenient therapeutic method thus far proposed in tuberculosis. As a diagnostic agent, it is invaluable, specially in larvated forms of tuberculosis masked by other symptoms, notably chlorosis, which is not regarded as an early stage of pulmonary tuberculosis.—Prager Med. Wochen, vol. 28, 1903.

Pottenber concludes a critical study of tuberculin by maintaining that a patient treated with tuberculin and allied products stands a better chance for recovery than when these agents are eliminated. He contends that their employment prevents a spread of the disease to new tissue, and when an apparent cure is attained, there is less danger of relapse. Therapeutic Gazette, March 15, 1903.

The Importance of the Nerve Centers in Pulmonary Consumption.—Thos. J. Mays formulates the following conclusions: 1. The respiratory organs are biologically among the most immature organs of the body. 2. For this reason, they are specially predisposed to disease. 3. Degeneration or imperfect development of the vagi or their nuclei accelerates this tendency to disease. 4. Pulmonary consumption is from two to three times more prevalent in epilepsy, idiocy, and insanity than it is among the non-nervous population. 5. Both insanity and consumption were comparatively unknown among the negroes of the South before the Civil War. 6. Since emancipation, both of these diseases have increased to an alarming extent among these people. 7. These people, as a rule, first became insane and then phthisical. 8. The phthisis death rate is almost twice as high among the negroes as it is among the white insane. 9. This disease is largely and generally the result of a clash between unaccustomed environmental changes and an immature or impaired condition of the nervous system.—The Journal of Tuberculosis, July 3, 1903.

EYE, EAR, NOSE, AND THROAT.

By Wm. Ellery Briggs, Sacramento, and A. B. McKee, San Francisco.

Keratoconus.—Dr. Burnham, of Toronto, describes a case of keratoconus, in which, after constitutional treatment for eight months with mercury and iodid of potassium and pilocarpine, there was a very decided improvement in vision. The author considers the bulging of the cornea to be due to a disturbance of innervation.—The Ophthalmic Review, London, March, 1903.

Trachoma.—R. Opdyke refers to the frequent coincidence of trachoma and naso-pharyngeal adenoids, and believes that the lymphatic tendency resulting from the adenoids increases the susceptibility to trachoma infection.—Medical Record, January, 1903.

Large Doses of Salicylic Acid in Uveitis.—Dr. Morton has found rapid improvement in plastic iritis from the exhibition of large doses of salicylate of soda. He gives .6 to 1.2 gm. doses, increased to 1.8 to 3.6 gm. Gifford recommends 3 to 9 gm. At the same time, he uses pilocarpine and aperients.—Ophthalmic Record, January, 1903.

Dacryocystitis.—Rollet, of Lyons, says that the extirpation of the sac is the surest means of effecting a cure. Where no ectasia of the sac is present, extirpation is seldom indicated, and probing and irrigation generally effect a cure. If the removal is incomplete, return of the trouble is to be expected. In twenty-seven operated cases, there was complete cessation of discharge in twenty-four. Lachrymation disappeared soon after the operation. In only three cases was any trouble from that source, and all were cured by removal of the gland.—Wochen. fuer Hygiene und Therapie des Auges, vol. 6, No. 31.

Ether Narcosis.—Dr. W. Manninger, in commenting upon Sudeck's ether drunkenness "rausch" and Kronacher's interrupted ether narcosis, says: 1. Ether drunkenness is, of all methods of anesthesia, the least dangerous. 2. Its use is unaccompanied by any unpleasant after-effects, either nausea or late vomiting. 3. The method is extremely simple, so that, in case of necessity, the operator himself can administer the anesthetic; hence it is especially useful for general practitioners. 4. The method is applicable in all short operations, and is useful in ambulatory cases, as they can be dismissed after ten minutes. 5. Sensation of pain is completely abolished, whilst the reflexes are retained. 6. In operations of greater duration, by combination of Sudeck's and Kronacher's methods, analgesia can be prolonged as much as desired. The stage of excitement should not be much exceeded. A few whiffs of ether after this period will prolong the anesthesia five to ten minutes. 7. It is strictly to be observed that the ether be pure. Merck's is recommended. Not uncommonly the patient is not quiet, hence this method is not to be recommended to nervous operators; still this inconvenience is more than overcome by the freedom from danger.—Wochen. fuer H. und T. des Auges, vol. No. 31.

Cataract Operation.—R. H. Elliott describes the technique pursued in 500 cases operated upon in the Madras hospital. The blunt instruments were sterilized by boiling, the knives by rubbing with chinosol. The capsule was opened before completing the incision. Iridectomy was done as a routine measure, and debris removed from the anterior chamber by irrigation. Chinosol was used for washing out the conjunctival sac, and chiosol compresses served as dressings. After the third day, atropine was always used.—Muench. Med. Wochen, 1903-3.

The Influence upon the Eye of Powerful or Long-continued Illumination.—Herrnheiser ascribes the injurious effects of strong light to the ultra-violet rays. As the lens has the power of absorbing most of these rays, patients are often conscious of them after removal of the lens. He attributes snow-blindness, with its acute irritative condition of the anterior portion of the eye, to the same influence as that producing erythema of the skin. The erythropsia accompanying snow-blindness is due to the action of the rays upon the retina. After long exposure of the retina to light, it becomes pale. Upon entering a dark room, there is a new development of the visual purple, and objects assume a deep purplish color. Pain accompanying exposure to strong light is due to powerful contraction of the iris, hence the effect of atropin in diminishing photophobia, although the dilated pupil admits more light. Lightning acts mechanically and chemically more than by reason of its light intensity. It causes destruction of groups of epithelial cells in the lens, and opacities result. Arc lights cause the so-called ophthalmia electrica. There are two different degrees of intensity. In the milder form, the exposed portion of conjunctiva is congested and chemotic, and there are photophobia and phosphenes. The more severe form shows a central scotoma, feeling of a foreign body in the eye, pain in the head and eyes, blepharospasm, contracted pupil, and pericorneal injection. Antiphlogistic measures and the dark room relieve the first form promptly, but in the second form a permanent scotoma sometimes remains. Strong sunlight, the glare from water, or observation of eclipses with unguarded eyes produces damage in the shape of retinitis or retino-choroiditis of the macula region, and a central scotoma may persist. The conclusion is that all of these injuries are the result of the chemical or ultra-violet rays. The electric light is especially rich in these rays, after which follows sunlight, which is most injurious in winter. The media of the eye absorb ultra-violet rays, and the damage to these parts is in inverse ratio to the fluorescing power of the media; hence the lens which possesses this power in the highest degree is seldom injured. Widmark made a series of experiments in which the possibility of injury from heat was excluded, and the effects can be attributed only to the chemical rays. In addition to cautions regarding protection against lights rich in chemical rays, the author says that the eyes must have time to rest and renew their store of visual purple, hence the evil of night lights and the value of the dark room in the treatment of diseases of the retina, nerve, and choroid.—The Aertzliche Praxis, 1902, Nos. 21-23.

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LANE MEDICAL LECTURES

The Lane Medical Lectures for the year 1903 were delivered by Oscar H. Allis, M. D., of Philadelphia. The course was to be a practical demonstration of fractures and dislocations, their mechanism and treatment.

This series of lectures was a distinct success; they were refreshing, practical, and impressive. To Dr. Allis too much praise can not be extended. It must be remembered that Dr. Allis has not enjoyed the privilege of a professorship in any of our universities nor the experience afforded by such work; and while this may be a detriment in the minds of some, it seems quite apparent that it gave us a lecturer, who, after years of labor and thought, presented a series of conclusions that were brilliant and strikingly free from the formality of the school or platform. Of so novel a nature, so new and original, were some of these deductions, that a more detailed reference can not be considered out of place. The intention of the lecturer and the founder was that this course should not embrace an exhaustive review of the history or current opinions on these subjects, but that they should be suggestive and provocative of thought in the minds of his hearers, open up new avenues, and spur them on in the lines suggested and founded upon a logical study of these structures. The cadaver was brought into play to illustrate the work designed and executed. After a brief review of bone and the part it plays in the production of fractures and dislocations, the general anatomy of the joints was considered. Ligaments were defined as flexible bone, and the benefits and obstacles presented by them under these conditions were considered in their newest light. The more common dislocations of the shoulder, hip, and knee were produced before the audience with force applied by ingenious apparatus, and the joints subsequently opened, exhibiting the particular lesions that resulted. One noteworthy principle brought forward was that dislocations of the shoulder often result from sudden traction by the pectoralis and the latissimus dorsi muscles, as when the arm is suddenly raised. One of the most striking demonstrations was that of fracturing the femur by forced flexion which left the fragments united by a fibrous hinge, which was considered of the greatest value in replacing the bone. The truth of this was beautifully and deftly shown in the experiment of reducing a dislocation of the hip, complicated by fracture below the trochanter, produced by sawing through the bone after the production of the dislocation. The fibrous structures permitted traction to be made on the short fragment upwards and inwards, when, with very little manipulation, the head of the bone was brought into the acetabulum. Special reference was made to fracture of the internal condyle of the humerus, dressed in the extended position, with the expectation of avoiding the gun-stock deformity, by which the carrying function is lost. He gave credit to Dr. Powers, of Denver, for success in treatment of this fracture in extreme flexion. A final point was that the hip is most easily dislocated in flexion, and to prove it, force was applied to the flexed knees of a cadaver and both hips thrown out simultaneously. This was deemed important, as having some bearing on the production of congenital dislocations, in that the position of the cadaver imitated that of the child in utero. Dr. Allis expressed it as his conviction that congenital dislocation of the hip is traumatic, and not the result of defective development, as is hare lip or spina bifida, and hence a rational therapeusis might be expected to bring about a cure.

He verified his work before his audience; they could see and feel for themselves; his demonstrations were open to the inspection of all. This could not fail to impress his audience deeply. His technique was simple and convincing; there was no effort at effect. Each dislocation was produced, reduced, and confirmed by dissection. Nothing more could be asked.

So free were the addresses of this genial and sincere man from the usual verbosity of lecturers, so strikingly clear, so easy, and so notable for simplicity that some might hesitate to accord them their true scientific worth. It was this easy simplicity that rendered him so interesting. No text-book, foreign or domestic, has ever presented this subject after this manner; none present the subject of causation and obstacles to reduction so clearly; none give so simple and easy methods of reduction. The methods of the books were briefly and generously considered, their faults outlined, and their value duly accredited. His preference for the open over the bloodless method of treatment in these conditions was logically and most convincingly shown.

This series of lectures was a distinct contrast to the others of this course; they were delivered practically without notes in a graceful and fluent style. From a scientific standpoint and for real practical worth they equal if they do not surpass any that have been delivered. It is deeply to be regretted that the results of such patient, honest, scientific work are not available in book form. The attendance was very large. The interior of the state was well represented, but, as usual, the local profession did not show the appreciation that so earnest and enthusiastic a student should receive.

THE ANNUAL REPORT OF THE SAN FRANCISCO BOARD OF HEALTH AND MORE PLAGUE.

The annual report of the Board of Health of the City and County of San Francisco, which appears elsewhere in this issue, has once more been denied publication through the regular channels by his Honor, E. E. Schmitz, Mayor. The document fully and caustically presents the reasons for this action on the part of the local Chief Executive, who has taken unto himself the privilege of complying with only those obligations of his office that suit his desires. This suppression of the "Monthly Bulletin" is justly censured by the following resolution: "Resolved that this Board [of Health] condemns the action of the Mayor as unwise, inexcusable and dangerous to the interests of this city, and now declares that upon him must fall the responsibility for the consequences which his act may have in arousing the prejudice and incurring the ill-will of sanitary officers of Eastern States, who are thus refused information, which they constantly demanded and to which they are entitled; be it further resolved that copies be transmitted to his Honor, the Mayor, the State Board of Health, the Public Health and Marine Hospital Service, and the Governor, George C. Pardee." The severest and most appropriate comment, that can be made to this idiotic act of the Mayor, is the continued recurrence of cases in our city and state. Within sixty days three white persons have paid the penalty of the foolish attitude of our press and certain officials. It may be well and wise for commercial interests to urge that these cases are sporadic and mean nothing. The history of the epidemics of the world stands boldly out in defiance of the wilful and studied indifference of our people for commercial gain. Mayor Schmitz no doubt believes that no great number of cases will arouse the community during his term of office, and that he can hold the ear of the public by lying publicly and admitting the truth only when forced by circumstances. It is apparent that when one becomes so devoid of moral responsibility he forfeits all claim even to adverse criticism. His responsibility, however, does not end with the tenure of an office he has disgraced and abused, but woe to him and his cohorts if this scourge shall ever fall heavily upon our city and state. The "Bulletin" of the State Board of Health for Aug., 1903, through the efficient Secretary, N. K. Foster, for the first time since the disease was discovered published a list of cases. Since our last issue the following deaths have occurred: 98. Gee Jim died July 29 at 722 Jackson St., found dead, autopsy, bubonic plague. 99. Charles Bock, German, lived at Pacheco, Cal., came to a prominent hospital in San Francisco where he died two hours after admission. Diagnosis of bubonic plague made before deaths 100. Wo Cong Chong found dead August 22, at 735 Commercial St., bubonic plague.

SOCIETY PROCEEDINGS.

SACRAMENTO SOCIETY FOR MEDICAL IMPROVEMENT.

Regular Meeting, May, 1903.

The president, Dr. Thos. Ross, in the chair.

NEW MEMBERS

N. K. Foster, M. D., of Sacramento, and J. H. Leimbach, M. D., of Isleton, were duly elected members of the society.

Dr. A. C. Hart read a paper entitled

TYPHOID FEVER

Dr. E. W. Twitchell, in opening the discussion, said: I rather expected the author would treat the subject more from a sanitary standpoint than he did. Where we have only a limited number of cases it is exceedingly difficult to find out where infection is coming from. In the cases we had in Sacramento there was a good deal of suspicion of a certain dairy, but nothing definite could be arrived at, for several reasons, the principal being that with the means at hand the absolute conditions of the dairy could not be arrived at. Discovering the typhoid bacillus in the milk of a dairy is a very intricate process, there being no one in town capable of carrying out such investigation, or at least there was no one properly equipped for such investigation. One trouble is that in matters of this kind the authorities do not take an active stand until a number of cases are in evidence and everybody becomes frightened. That is what did happen in Ithaca, N. Y., and the trouble was traced to the water supply. In the case of Palo Alto the trouble was traced to certain dairies. In our cases it did not extend far enough to make them go into the work carefully. It seems to me there should be same provision made whereby, in such cases when any one dairy is under suspicion, it could be definitely examined. Of course, there is another thing to be considered, namely, the number of so-called typhoid cases that do not turn out to be such. There are so many obscure cases of continuous malarial fever that nothing short of careful examination for plasmodia, and for the widal reaction, will determine whether we really have typhoid to deal with or not.

Dr. G. C. Simmons: I believe I was responsible, in part, for the newspaper statement that the source of the trouble was traced to a certain dairy. I was called to one house where there were two cases of typhoid. For a week before I was called in, the daily range of temperature was typhoid in character, being 103 in the morning and 104 in the afternoon. Upon inquiry I found they were taking milk from a certain dairy and also learned of two other typhoid patients in a family that had been taking milk from the same place. They stopped taking the milk, but the fever still continued. In a few days I was called to another family and they also were taking milk from this dairy. I had seven typhoid cases all of whom were taking milk from this same source. I also learned of several other cases. In the Massachusetts General Hospital I saw a number of typhoid cases that might be called typical. I have seen none such in Sacramento. Rose spots are seldom present in our cases in Sacramento. Typhoid here, so-called, I believe is often mixed infection of typhoid and malaria. I think it is a self-limited disease.

Dr. G. L. Simmons: During the life of this society we have discussed the subject of the possibility of there being a mixed infection in our typhoid cases several times, and there seemed to be a general opinion that there was no such condition, and that the name of typho-malaria was not warranted. Within a few years, however, it has been determined that the plasmodium malaria and the typhoid bacillus could coexist, and we are therefore authorized to use the term. I think a certain per cent of our cases of continued fever are of this class, and the presence of the malarious germ fully accounts for the appearance of intermitting symptoms after we had supposed convalescence was established.

Dr. J. A. McKee: At the time the article in regard to this dairy being under suspicion appeared in the "Bee," I felt that I was the guilty one, as I had seven cases all taking milk from the same dairy. I met Drs. Parkinson and W. A. Briggs and eighteen cases were enumerated, all taking milk from the same dairy. The water furnished to the cows I do not think has anything to do with it. I do not think we get it from the cow; I think the bacilli get into the milk either through bad water in cleansing the vessels, or with which the milk is diluted. I had one case that gave me a great deal of trouble, the patient having had several hemorrhages. I used hypodermatically Parke, Davis & Co.'s aseptic.

Dr. G. A. White: There is nothing new of value that has lately been advanced in the treatment of typhoid fever. The use of chlorin in typhoid fever is not new; it is the method of its administration that is new. Now and again we meet cases of typhoid that require surgical treatment. There have been a few such cases operated on in this city. A few weeks ago, during the endemic of typhoid fever, I was invited to see a patient with perforation of the bowels, but the child was almost in a state of collapse. I advised the attending physician against operation in that case. In this connection I want to say that cases in which surgical intervention is likely to be successful are those which are operated upon within the first twelve hours after perforation; those that are attempted later will be found, as a rule, to be so infected that a surgical operation will fail.

Regular Meeting, June, 1903.

The president, Thos. Ross, M. D., in the chair.

NEW MEMBERS

J. S. Boyer, M. D., of Sacramento, was duly elected a member of the Society.

Dr. F. W. Hatch read a paper entitled

GENERAL PARESIS

Dr. Ed. W. Twitchell: General paresis is, I think, one of the most appalling things in psychological medicine to-day. Especially so, for it strikes so close to us; the greater part of the cases are among our own class, not among the poor and destitute. I think that the name ordinarily used is rather unfortunate, because it tells so little of the symptoms and of the pathology of the disease. Paresis is one of the later symptoms, occurring after the case has left the hands of the family physician. My own preference is for the term paralytic or paretic dementia. North America and Northwestern Europe produce most of the cases, as has been said. The immunity of the Scotch and Irish at home is peculiar, since those who have migranted to America seem just as susceptible as any other race. As to the declaration of some of the German authors that without syphilis there can be no general paresis, I can not subscribe to that for I have seen undoubted cases in which syphilis could not be traced in spite of a very complete family history extending over three generations. I do not think that sexual perversion cuts any figure in the etiology. If so, the Asiatics should be great sufferers, which they are not. One of the most distressing features is the tendency to strike more and more at those of earlier age. Formerly it was uncommon to see general paresis prior to twenty-five years of age, as it was likewise common to see it in women. The ratio in state hospitals was about ten men to one woman. But there is no doubt that cases in women and cases in very young adults are increasing. The most important thing in general paresis is the early diagnosis. Then you may impress upon the relatives the gravity of the case and take precautions to prevent acts that might ruin not only the patient but the family. Many a case is not discovered until the accumulations of years have been wasted in riotous living and foolish speculation, leaving perhaps a wife and children in poverty. Such catastrophies may be prevented by early diagnosis. To my way of thinking the most important single symptom is the absence of light reflex in the pupil. In most every case this exists sooner or later, and when found you are warranted in the gravest prognosis. I think that exaggeration of tendons reflexes is a symptom more common than admitted in the statistics quoted. At least such has been my experience. Differentiation from tabes is not always easy, especially in the so-called ascending cases. The gradually increasing dementia will have to clear such cases up.

Dr. G. A. White: This subject has been ably handled by Dr. Hatch. As a matter of fact, few of us have an opportunity of seeing much of this class of disease. Paresis, senile dementia, and that class of disease are collected in the state hospitals and the staff of these institutions have an opportunity of seeing and studying that class of disease more than the general profession. There is nothing that we can say that will add to the author's paper. The disease is hopeless in its nature and history. I think there is very little in the line of therapeutics that appeals to us. There is something, however, in prevention in that class of disease and should be undertaken at the beginning rather than at the close of the career of such patients.

Dr. J. E. Poore: I think a great many cases of paresis are the result of degeneracy which has been running for several generations and are hereditary cases.

SOME SURGICAL USES OF PARAFFIN

Dr. Morton presented the following patients: Case 1. Removal of superior maxilla for carcinoma; later the deformity was corrected by injecting at two sittings 40 c. c. of paraffin. Case 2, only one of this class. Has suffered past four years from necrosis of tibia, due to injury; the necrosed bone was chiseled out and the space filled with paraffin, and the periosteum stitched over, with good result. Case 3. Depression of nasal bridge due to syphilis. The bridge was elevated with forceps and retained by two injections one month apart. Case 4. Lateral deformity of nasal bridge from injury; crushed, straightened, and imbedded in paraffin which hardened and retained the fragments. Case 5. Restoration of congenital deformity of nasal bridge, by injection of 8 c. c. of parafin; no bad effects. Case 6. Atrophy of testicle—injected 40 c. c. of paraffin with good results. I have been using the ordinary paraffin, having it at a melting point of 109° F. by diluting it with sperm oil. It is then sterilized by simply placing the paraffin in a water bath, and boiling. The syringe I use is a Lure's syringe, as it has two distinct advantages over other syringes; it is always in working order, and secondly, you can see the condition of the paraffin at the time you make the injection. The needle is a large size hypodermic, and is readily attached to the syringe by a joint. The first case is a gentleman who has been suffering with carcinoma for about two years, of the right superior maxillary bone. He presented himself at the City and County Clinic last December, where we diagnosed the carcinoma of the right superior maxillary. We injected him with cocain and proceeded to remove the mass, and the entire right superior maxillary bone back to the zygoma. He recovered in a very short time, but with the characteristic deformity, where you have the absence of a superior maxillary. We, at two different sittings, injected into this space just beneath the skin 40 c. c. of paraffin with the melting point 109°F., and built it up so that it bridged over. There was a slight swelling which lasted about a week. The man was discharged, but returned one month ago with carcinoma beginning to fill in the right nostril. We dissected out both external carotids, cutting off the blood supply to see the result. The next man is the only one that I have attempted to use paraffin on in bone surgery. He has suffered for four years with necrosis of the bone as a result of an injury, and some osteomyelitis. We operated on him three months ago making an incision, chiseling out the inner surface of the tibia for about six inches. We were able to lift the periosteum and fill in an enormous quantity of paraffin, then stitched over periosteum, and we have had a beautiful result. Just what factor the paraffin has been taking I am unable to say. Paraffin acts somewhat as a blood clot for bone tissue to fill in. We have here another class of cases, where we have the entire absence of the bridge of the nose due to syphilis. We injected paraffin in from each side, at the same time holding the bridge upward to prevent interfering with breathing space. First injection caused irritation; we waited one month and then made a second injection. The second case was one where we have a lateral deviation of the nostril, with a slight depression in the center line. In this case the patient was placed under a general anesthetic, the septum crushed and the upper portion of the superior maxillary bone fractured, then pressing the nose to the opposite side. The nose does not have tendency to remain in that position, but I have found by imbedding the paraffin it seems to act as a splint, and succeeds in holding it in good condition.

Dr. A. B. Grosse: I have been very much interested in Dr. Morton's case, but not having sufficient experience in much of this work I will confine my remarks to cases pertaining to my specialty. If Dr. Morton has succeeded in repairing the deformity of syphilitic saddle nose as he describes, i. e., injecting paraffin from both sides of the nose and in that way building up the bridge, he certainly accomplishes surgical impossibilities. For when the bridge and nasal bones are destroyed by syphilitic disease the soft tissues sink down and are tied down by dense adhesions. In my cases and in all other cases published up to date, the adhesions had to be carefully severed by a tenotomy knife or some other specially constructed instrument and the paraffin injected from either side, moulding the shape of the nose to suit the wishes of patient and operator. The description of Dr. Morton's technique seems delightfully simple, but with this very method I have had considerable difficulty and trouble. I have used the same type of syringe and needle but found that the paraffin always congealed before I could inject into the tissues. After repeated trials and by heating needle and syringe I practically overcame these difficulties. In April, 1903, I read the reports of H. Eckstein Berlin who has constructed a syringe which can be heated without damage and must for that reason be considered a distinct advantage. Also he uses his paraffin of high melting point, as it sets more readily and is not absorbed but encapsulated.

Dr. H. M. Sherman: I am also interested in this subject. I had a case ready for this procedure when I heard Dr. Morton deal with this same subject in Santa Barbara. I have had the same difficulty of which Dr. Grosse spoke. The paraffin congealed in the needle. This was a case of broken nose, and I found it impossible to get the paraffin through that part of the needle which was outside of the skin without solidifying.

Dr. Stapler: I have had some experience with paraffin injections. I made several injections in animals and human beings. I injected large quantities in rabbits. The paraffin will spread in rabbits all over the body, owing to the looseness of their skin. We injected it also into the abdominal cavity, where it formed large plates which were adherent to the omentum or intestines by dense fibrous exudations. If we inject paraffin under the skin, it will always spread where the connective tissue is loose. We find after some weeks or months in the surrounding part new connective tissue. In some cases we will find giant cells, mostly where hard paraffin was used. After a few months the paraffin is divided into very small particles by the invading of connective tissue, and we will see in the microscope that the tissue looks like a sponge, and inside are small particles of paraffin. The cells surrounding the paraffin are flattened and look very much like endothelium. I mixed chlorophyll with paraffin and injected it into rabbits; the lymphatic system of rabbits differed from the human. Absorption takes place very much quicker. After a few days we find the lymphatics invaded with chlorophyll, even on the other side. We will always find also in human beings paraffin spreading toward the loose connective tissue. In December, 1900, I injected in my finger one c. c. of paraffin with a melting point between 56 and 60°, and if you will examine my finger you will find that the little lumps spread toward the center at the same proportion the lump gets smaller. We will find beside the absorption of the paraffin a displacement in the tissue. Dr. Morton said he injected 40 c. c. in one man. I find that 8 to 10 c. c. is the highest we should inject at once, if we do not want to have an intense reaction, such as chill and high fever beside redness and swelling. These injections are not entirely devoid of danger. Many cases of emboli in the lungs are reported. In one case a small quantity injected in the nose was promptly followed by blindness on one side. I prefer paraffin of a low melting point, 39° to 42°, because it gets just as hard as hard paraffin after a few weeks and the danger of causing emboli is very much smaller. Paraffin of a low melting point facilitates the technique enormously.

Dr. Rosenstirn: I had occasion to also form a testicle in a case where on account of bilateral tubercular epididymitis and orchitis I had to remove both epididymis vasa deferentia and testicles with the exception of a small fragment of one which I could leave. Th patient developed a very severe melancholia and threatened to commit suicide. With Dr. Stapler's assistance we injected on the left side, unknown to him, a certain amount of paraffin, and in that way formed a testicle which seemed to have the reassuring desired effect upon him. I would also like to speak about the patient of Dr. Morton's with the bone cavity in the tibia. All over the part that had been exposed by chiseling the skin is adherent to the bone. There is an ulceration of the skin and a suppuration and partial elimination of the filling going on. My plaster of Paris method shows better results. The cases which I have had the good fortune to have under my care have healed with movable skin over the filled bone. That is the skin is not adherent and inflamed as in this case, but has a perfectly normal appearance. I may add in this discussion that one of my patients, a man who suffered from general osteo tuberculosis, died from tuberculosis of the pelvic bones two or three years after a filling of the entire right radius and completely healed. I took this radius out and found it quite restored, no recurrence, and one could still detect in the new formed rather sclerotic spongiosa some parts of the plaster of Paris with which the entire cavity had been filled, but only in small specks, the balance had been absorbed and replaced by new bone.

PARAFFIN IN NASAL DEFORMITIES

Dr. Morton: The next case is one of those congenital characteristic saddle back noses. The operations for restoring this deformity have been very difficult, until the use of paraffin. The injection of 8 c. c. completely restored the deformity without any inflammatory reaction. The next case is one of unusual interest; at the age of three years he had an injury to his left testicle; the testicle had completely atrophied when he called my attention to it some six months ago, wanting the absent member restored. We injected into the scrotum about 40 c. c. of paraffin, moulded it into position, and to-day the testicle has all the appearances of a normal one. In a number of cases I have found adhesions of the skin, generally in syphilitic cases or from traumatism. In such cases I have found two ways of separating the strong adhesions. 1st, by infiltrating with water; 2d, with a very delicate scapel, which I have slipped just beneath the skin, separating all the adhesions, then infiltrating it with paraffin. The greatest objections have been that the needle became obstructed. We overcome that objection by first introducing the needle and attaching the syringe when ready for use, which can be readily done as it is attached by a joint. The melting point of the paraffin is a very important feature; if used at a high melting point it is more difficult to introduce, as it is liable to coagulate, and then there is danger of necrosis, or sloughing. If it is used near the temperature of the body it may not coagulate soon enough to support the parts, and there is more danger of embolisms. I have found the melting point of 109° F. very satisfactory in thirty-six cases. The change which takes place in the paraffin when deposited in the tissues is very interesting, and has caused much discussion. In one of my early cases some of the paraffin pressed below the turbinates. I removed a section of this each month for five months, and found at the end of that time that the entire mass was converted into connective tissue. It would appear that the paraffin acts simply as a blood clot for the time of repair, and the relief of the deformity is permanent. To prevent the paraffin from slipping into the sides, it is well to keep firm pressure with the fingers at the time of the injection. It has been used in hernia to plug the canal, but I can hardly imagine a condition where it would be better than the radical operation. Another gentleman spoke of the danger of emboli; this danger can be easily overcome by using the paraffin with a melting point above the body heat, so that it will coagulate when deposited in the tissues. The experiments of Dr. Comstock, of Minnesota, are conclusive; he injected animals with the melting point of the paraffin below the body temperature, all of which died in two weeks from emboli.

Dr. H. M. Sheman presented a

REPORT ON TWO OF THE LORENZ CASES

Dr. Sherman: In each case the original dressing had been taken off and the child immediately radiographed. Examination of each then showed that the femoral head was in front of the trochanter, the latter was close to the acetabulum but to its outer side. The former was in a subfacial location in the outer part of Scarpa's triangle. It was difficult to see what had been gained by the operation. One of these cases was submitted to an arthrotomy. By this it was found that the manipulation operation had torn the femoral capsule, and thrust the head through the rent out among the muscles. In this position a thin adventitious capsule had formed about it, but the femoral articular cartilage had become eroded and absorbed. The proximal part of the torn capsule was adherent to the acetabular floor and was a positive obstacle to reduction of the dislocation. After it had been removed the head was put in the acetabulum, but this cavity was very shallow. The outer case was not cut down on and it was assumed that the conditions here were like those of the first case. The boy has been permitted to walk about. The head is still in an anterior location, but the posterior one is a possibility. Dr. Sherman promises further reports of these cases.

Dr. Stapler: I intended to bring you today the first patient of Dr. Lorenz, a little girl of eleven. Unfortunately the patient has left the city. I wanted to show you this patient; not because she has the plaster of Paris, not because she was operated upon by the bloodless method, but I wanted to show that the treatment of the congenital hip does not lie only in the manipulation in the application of a splint, but mostly in the after treatment. This was neglected in several cases. First of all Lorenz insists that they must walk. That is very important because we know that there is no acetabulum, no normal head, and all we can do by the bloodless operation is not to make a new head, but to make way for a new joint. This child will use its limbs more or less normally. If the child walks it presses the abnormal head in the abnormal acetabulum and forms a new point. It is very important to let the child walk and run. There is another child I know on which he operated, which never walks but sits in bed. I think we should not judge any of his cases just right after taking off the splint, but after manipulating and treating the patient from one to two years as Lorenz does. Whether the head is in the acetabulum or not, higher or lower, as long as it is of good use for the patient, the functional result only counts. It is like in a old luxation of the humerus; there it is far better to make a bloodless reduction than to make a resection of the head in order to have a joint that will do the work. We should judge these patients after one or two years to see how much we have accomplished.

Dr. Terry: I want to ask if Dr. Sherman thinks it would be unwise to attempt the Lorenz operation in these cases—if there is anything against doing it first, and then if it is a failure, doing something else. I did one of these operations and was pleased with the result. The reposition is apparently perfect, and the X-ray shows the head of the femur in the acetabulum. In that case the child was younger and the acetabulum deep enough so that the head of the bone stays in place.

Dr. Kenyon: Dr. Sherman's paper accentuates one of the difficulties in this class of cases. I refer to the capsule, the ligamentous tissue filling into the already imperfect acetabulum and filling it up. When I began the treatment of the fractures of the patella, I practiced entirely the fixed dressing and I found great difficulty in approximating the parts, I did not then fully appreciate the difficulty in the effort of approximation until I began to operate in those cases. Those who have operated on cases of fractures of the patella will note that the periosteum has a tendency to fall in between the fragments, preventing osseous union. In the case of operation, the periosteum is lifted up and the osseous parts are brought together. This ligamentous tissue of the capsule of the hip, which is not very absorbable, finding a resting place in the acetabulum permanently keeping the head of the femur from its normal position, prevents a favorable result in the restoration of a congenitally dislocated hip joint.

Dr. Sherman: I do not know but what Dr. Stapler is right in a certain way. The cases have not been in existence, as operated upon cases, long enough. There are certain things which have come up which have surprised me. The effort of Lorenz, as I saw him work, was to put the head in the acetabulum, and he put on the splints to keep such reduction as he had succeeded in getting. The after treatment, of course, is of moment, but not of the only importance. I have seen some of these cases which were not my own patients. One in which the child had not walked, and in that case the femoral heads were still on the acetabulum but not in them. The children who had walked had pushed their femoral heads away from the acetabula, some to the outer part, some to the inner part, but the head was decidedly away from the acetabulum. Walking had produced a new dislocation. It had not in this instance made an acetabulum. The capsule question is the real question in the whole proposition. If you have a capsule elongated, but not constricted, and can pass the head down that capsule into the acetabulum, and you put the leg up in a proper position, you can keep it there and can develop an acetabulum. That hip may be exceedingly useful. In such a case of mine the child afterwards developed a vertebral tuberculosis and later a tuberculosis of the opposite hip. He has gone through the treatment appropriate for these conditions and now is walking on his congenital dislocation hip (the reduction being permanent) and crutches, while the spine and other hip are in braces still. Oshner, Jr., of Chicago, made a reduction of this character. He kept the case carefully under his supervision as long as possible, and the people promised to let him know if anything ever happened to the child. He received notice of the child's death and he has the specimen—normal on one side and the reduced dislocation on the other, and you can not tell these apart except for the absence of the ligamentum teres. It is only where the capsule happens to be very lax that Dr. Lorenz can with any possibility produce an anatomical reduction. If we could be sure that we could make the reduction, yes, then we should use this method; but if one's efforts were carried to such a point that you lacerate the capsule and thrust the head out among the muscles, then *no.*

Dr. Sherman reported a case of

ACUTE SUPPURATION APPENDICITIS DUE TO BACILLUS OF FRIEDLANDER.

The case began in the usual way, and was submitted to operation within the first twenty-four hours. The belly was full of sero-pus and the appendix perforated. The usual removal of the appendix was practiced, the belly was drained with gauze and the case made an uninterrupted recovery. The investigation of the appendix and of the first drain after its removal gave pure cultures of Friedlander's pneumo-bacillus. Dr. Mary Halton had done the bacterioscopic work and had proven by getting clumping of the bacillus with the patient's blood that the organism had been an infecting element in the case. Dr. Sherman commented on the fact that he had not seen this pathogen credited with this lesion before.

Dr. Dudley Tait in discussing Dr. Sherman's case: I wish to compliment my distinguished friend, Dr. Sherman, on the character of the work done at the Children's Hospital, from the various services of which we expect to receive from time to time some very interesting facts. Many of our hospitals, on the contrary, never even think of utilizing their cast material, while others furnish yearly long statistics of operative work alone, which closely resembles and almost deserves the name of "surgical sport." Dr. Sherman's findings are certainly interesting, and I beg to remind him that with the aid of modern laboratory methods his conclusions might have been, or rather most probably would have been, entirely negatived. To expose a specimen for more than an hour to the air and then take a culture from it, and furthermore to make culture from a gauze drain twenty-four hours after operation may be considered sufficient to suggest probable contamination. Many suppose that a few culture agar or bouillon tubes, an incubator or a convenient hip pocket are all the requisites for a bacteriologic diagnosis. They firmly believe that such a diagnosis is as easy as a qualitative analysis in inorganic chemistry. Unfortunately, many of the text-books hold a similar opinion. They forget that a very important class of pathogenic bacteria will not grow on the ordinary media in contact with air. If, for example, we take a specimen of pus from an acute otitis or a marked appendicitis and examine immediately with or without stain, we shall notice an extreme variety in the morphologic aspect of the specimen. Upon culture of this pus on the ordinary media, we shall be surprised at the enormous disproportion between the abundance of micro-organisms found upon direct examination of the pus and the small number of colonies developed. The conclusion is obvious; the majority of the bacteria have not developed. In some cases, the culture tubes remain absolutely sterile and then the hasty or ignorant observer concludes to the sterility of the pus. In case some rare colonies do appear they generally belong to the common pyogenic varieties. The majority of the forms noticed in the pus are not present. Now, experience shows that if instead of using the ordinary media as for aerobic bacteria, we make cultures on media deprived of air, an abundant growth of anaerobic bacteria takes place and one finds again the numerous forms noted originally in the pus. I have never understood the silence of the English and the American school upon the subject of the role of the anaerobic bacteria. Very recently in the Hunterian lecture upon the pathology of appendicitis not one reference was made to this all-important subject, which the French school has studied most carefully ever since Pasteur, in 1861, first isolated and cultivated the first anaerobic micro-organism. In 1889, while working in the Pasteur Institute at Paris, I saw considerable attention given to this class of bacteria, and during the past five years excellent results have been obtained, especially in the study of otitis, gangrene of the lung, urinary infections, and anglo-cholitis and appendicitis. In a series of twenty-two cases of appendicitis reported in the "French Archives of Experimental Medicine" in the latter part of 1898, a most careful bacteriologic search showed the presence of anaerobic bacteria in every case but one, this being a mild pneumococcic infection. In many cases the lesions were solely due to the anaerobes. The most practical method of studying anaerobes is with the Liborius tube, as modified by Veillon, which permits of an easy segregation of the aerobic, facultative and obligatory anaerobic bacteria. In conclusion, I would suggest that we resort to the more accurate methods of bacteriologic diagnosis, even if such methods be delicate and require several weeks to investigate a single case.

Dr. Sherman: I do not think that I ever derive more profit than I do from the criticism of Dr. Tait, and I am very glad that he went over this question for me. The possibility for contamination, of course, is acknowledged. If it had not been that the cultures came out as they did, this paper would not have been read to-night. As Dr. Halton says, we may be perfectly certain that the pneumobacillus was in that patient. It would be impossible for me, or for any one to carry a sterile material from one place to another and infect it with the same organism. Concerning the methods of diagnosis with regard to the use of tubes, etc., the criticism is good and I agree with it. I learned to carry sterile tubes in my pocket from Dr. Tait, and I find them to grow very well indeed when inoculated. The question of the bacterioscopic work I have left to Dr. Halton. The change which came over my idea regarding the case, after what I had supposed to be a fatal condition, made a great impression upon me, and therefore I had it followed out. Looking for organisms which are in the appendix is simply a routine matter. I should be inclined to consider that Dr. Halton's opinion on the presence of these organisms in this patient would have to stand.

AN INTERESTING CLINICAL CAES.

X, a white woman, twenty-two years of age, was taken into the hospital on account of syphilitic skin disease (roseola papula); a blennorrhagic vaginitis of most violent description with strong congestion of the mucous membranes of the vagina. The latter was of violent hue, somewhat brittle, and yielded abundant secretion of a greenish yellow pus, which showed under bacteriological examination abundant colonies typical of gonococcus, diplococcus, and other varieties of bacteria. The gonococci infection reached to the neck of the uterus whose tissues suffered from the same degeneration as the vagina. Above the mouth of the neck,—from which a greenish yellow and somewhat thick pus oozed—was a syphilitic ulcer of the size of a dime, clean at the bottom, livid in color and rather deep.

Upon careful examination, the patient was found to be pregnant in the third month; and, from the start, was subjected to energetic treament as a serious case.

Under the treatment employed she improved rather well; but though the blennorrhagia was not cured, the syphilitic manifestations of the skin disappeared, and the ulcer at the neck improved somewhat, until confinement, which took place at the eighth month, five months after her admission.

The confinement was normal. However, the patient was attacked by a great flux and suffered a complete laceration of the right side of the neck; an incomplete laceration of the left side; an incomplete laceration of the rear wall of the vagina; and a two-thirds laceration of the perineum. The placenta was removed at once; ample warm washes of a 1 per cent solution of permanganate of potash was applied and the uterus was stimulated by massage, but remained inert. All this was reported to me by the house physician. I arrived at the hospital four hours later in company with the well-known gynecologist, Dr. Mendez Capote, who, upon having examined the patient, decided to sew up the lacerations. He washed out the vagina and uterine cavity completely; adjusted with scissors the edges of the lacerated tissues; sewed up the wounds and touched the ulcer at the neck with the cauterizer; then he gave another wash and plugged with iodoform gauze.

When the patient was on the operating table, she had fever, 38.4° C. At 5 P. M. the fever was at 39°; then the vaginal plug was taken out and a great intra-uterine wash of a one-half per cent solution of permanganate was applied very hot in quantity of five liters. The fever was at 40° throughout the night, and washes were given every four hours.

The following day at 8 A. M., temperature 40°, same local treatment. The fever lasted all day, falling to 39° by the wash, but rose again to 40°.

The day thereafter, fever at 41°; same treatment with more vaginal washes of bichloride of mercury, before the uterine washes; the fever keeps at 41°.

On the next day at 8 A. M., (temperature 41.5°), I took out the stitches made on the day of confinement, washed well both uterus and vagina, dried the latter with carbolated cotton and conveyed into the uterine cavity eight grammes of pure Hydrozone, taking care that this liquid should flow toward the vagina, into which I poured about 60 grammes of the same liquid and drained the uterus with simple gauze saturated with Hydrozone while the vagina was drained by the same means.

From that time the fever declined slowly, and at 6 P. M. it was apyretic. The fever did not return, and the patient's cure proceeds without further difficulty.

This case, which is interesting by itself, proves of great value in setting forth two points; viz.:—

1. That, although the intra-uterine injections of pure Hydrozone may be dangerous, it can be applied if care is taken to keep the neck dilated as much as possible.

2. That in this case the superiority of Hydrozone over the other treatments of puerperal septicæmia, in connection with gonococcia, is indisputable; and that this splendid

result should encourage repetition of its application.*—Dr. Matias Duque, Director of the San Antonio Hospital, Section of Hygiene. Abstract from the "Revista Medica Cubana," April 15, 1903.

SAN FRANCISCO COUNTY MEDICAL SOCIETY.

Regular Meeting, July, 1903.

The president, L. A Kengla, in the chair.

Dr. M. E. Kibbe read a paper entitled

ASCITES DUE TO SYPHILITIC CIRRHOSIS OF THE LIVER, TREATED BY EPIPLOPEXY.

[Published at page 303.]

Dr. G. Ebright: Too conservative treatment can not be assumed in regard to these operations. The condition, even in extreme cases, can probably be relieved by medical means more often than by surgical. The operation is made under many difficultie, not the least of which is getting adhesions in a badly diseased peritoneum. Then again, it is extremely important to know that there is enough liver substance remaining to functionate. We had in the hospital a man suffering with cirrhosis of his liver with ascites, and extreme toxic symptoms which culminated in delirium and then followed coma. Apparently the man would die in a few hours. However, he recovered, had another relapse as bad as the first, and even after that got well enough to go to work. Had he been operated upon and half as good a result followed, he would have been published as a surgical victory. Only 40 per cent of improvements, and only nine patients left alive at the end of two years of all those reported, does not speak well for operation.

Dr. Dudley Tait: Referred to the common erroneous belief in the existence of only two forms of cirrhosis of the liver, the atropic and hypertrophic, both of which most physicians consider incurable. Unfortunately, the majority of text-books repeat these inaccurate views and fail to mention the great frequency of spontaneous cure in the numerous hypertrophic forms of cirrhosis. Medical societies might throw some light upon the question by exacting more accuracy and more thoroughness in reports of cases. Dr. Tait considered the communication incomplete from the standpoint of clinical observation, clinical diagnosis, and operative diagnosis. No proof had been given of the presence of a syphilitic cirrhosis, nor was any attempt made to establish a diagnosis at the time of operating. The mode of dealing with the omentum was not in accordance with the most recent methods advocated by Italian and French surgeons.

Dr. Tait's idea that the specimens were exposed to the air for an hour is certainly erroneous. The appendix, and later the gauze drain, were brought to our laboratory wrapped in many layers of sterile gauze, surrounded with gutta percha tissue. Cultures were made immediately. Fifty colonies of Friedlander's bacillus developed in the first culture tube. Certainly if we should suspect contamination it is rather remarkable that we should not have had a bacterium more ordinarily found from contamination. Also it is still more remarkable that the second culture made from the case should have shown forty colonies of Friedlander's bacillus. That Dr. Sherman's conclusions should have been "most probably entirely negative" I think is contradicted pretty strongly by the fact that the patient's blood gave an agglutination reaction with the bacillus of Friedlander in dilution of one to forty. This is certainly good evidence that the patient was suffering from an infection with Friedlander's bacillus. I think that more attention has been given to the anaerobic bacteria than Dr. Tait realizes, and I also think that the reason that this work has not been reported is because of negative results obtained. Very few pathogenic anaerobes are known. It is true that Dr. Veillon has found a number of anaerobic bacteria in such lesions as otitis media, appendicitis, etc., but it remains for him to prove conclusively that these organisms are pathogenic and that they cause these lesions, and are not simply there as contamination, so to speak, since the sites from which these bacteria have been isolated are almost all parts of the body in direct communication with the external air. It also remains for other observers to confirm his work.

As far as the bearing of Dr. Veillon's work on Dr. Sherman's case is concerned, Dr. Veillon has found his anaerobic bacteria in the gangrenous cases, and Dr. Sherman's case certainly does not belong to that group. Of the few anaerobic bacteria whose pathogenic power has already been established I do not think there is any evidence that any of them were factors in the case. In conclusion I should like to say that the methods pursued in this case are those pursued in the vast majority of similar cases both here and abroad; and it remains for some one to prove that other methods are necessary before such methods will be adopted.

REMOVAL NOTICE.

The office of the Occidental Medical Times has been moved from 1121 Sutter to 1220 Sutter Street.

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*The son of the patient suffered from blennorrhagia in the eyes. He was treated with 1/4 per cent solution of permanganate and instillations of pure Hydrozone twice daily, alternating with cauterizations of 40 per cent solution of nitrate of silver; and he kept his sight.

CALIFORNIA ACADEMY OF MEDICINE

Regular Meeting, July, 1903.

The president, Dr. D. W. Montgomery, in the chair.

Dr. Terry exhibited a case of

FRACTURE INTO THE KNEE-JOINT

This man first came to the Hospital on the 13th of December last year. There was nothing in the family history of interest. On the 14th of September, 1902, he was injured by a man falling upon him. He received medical attention and the limb was put in a cast immediately, but had to be removed in a week on account of pain. Later he noticed that the limb was not straight, and he came to San Francisco. At one of the hospitals here the limb was probably refractured on the 12th of October. Another cast was put on. He left that hospital in December, and began to use the limb the latter part of December. It would swell and become painful, especially in the ankle and knee. A diagnosis with an X-ray picture was not made. It was seen by several doctors, Dr. Sherman and Dr. Huntington among them, but a diagnosis was not agreed upon. Some thought it was a pure subluxation of the knee, others that it was a fracture above the knee, and some one suggested a fracture of the internal tuberosity of the tibia, and that was what it proved to be on an X-ray examination. The man went away from the hospital. He got good motion and went to work again. He found that his leg would swell and cause pain in the foot, and he could not carry on his occupation. Now he has good function of the kneejoint. To-day we took another X-ray picture. There has been a fracture of the internal tuberosity with a subluxation outward of the larger or lower and outer fragment. Such fractures are quite rare.

Dr. T. W. Huntington: The patient comes from my service at the City and County Hospital. The main difficulty at the present time proceeds from interference with the circulatory apparatus, either in the popliteal space or below it. While there seems to be no tension at any point, yet the foot becomes edematous when he walks. We show the case chiefly to obtain an expression of opinion as to the propriety of surgical interference. I have felt that possibly by refracturing the tibia, following as nearly as possible the fracture line, the lower fragment might be brought into more normal relation, and better weight-bearing conditions be secured. While I have leaned towards operative procedure, I am by no means certain that we can find justification for temporizing as has been suggested by Dr. Tait.

Dr. Terry presented a case of

MALIGNANT DISEASE OF THE PALATE AND UPPER JAW

This man is 65 years old. The family history is negative. He smokes and drinks moderately. He used to chew hay a good deal. There is no history of luetic infection at all. Three years ago he had an inflammation of the mucus membrane of the mouth. He complained of tenderness before that time. It cleared up at times. After a cold he noticed a swelling which was quite tender. The condition now is one of epithelioma of the palate and upper jaw. There is nothing further except that we put the man on K. I., but when he showed evidence of iodism it had to be stopped. There was no improvement under K. I. I brought him here to consider the question of possible treatment with X-ray, instead of resecton of the whole jaw. I have seen it recommended that the X-ray should be used for such cases, rather than such an operation as resection of the whole upper jaw.

Dr. Huntington: This is a case involving the question so long under debate, and which at the present time is undergoing general revision, viz.: Shall we attempt extensive operations for malignant disease of the palate and upper jaw? In this case the disease is bilateral, involving extensively the submaxillary glands.

Dr. Dudley Tait: The point that interests me particularly is the mode of making the specific therapeutic test in the differential diagnosis of syphilis and malignancy. My experience in Paris hospitals, and especially the teachings of the great syphilographs of Saint Louis Hospital, have convinced me of the superiority of mercury in doubtful lingual lesions. The use of mercurial injections will rapidly clear up all doubt concerning the nature of lingual lesions, while iodids will frequently be followed by injurious effects; the malignancy is often suddenly enhanced. This point has been amply demonstrated by the French school. In this country we still cling to iodids because few of us know how to use mercury.

Dr. H. Morrow: I do not see the advantage of putting this patient under any treatment for specific disease as the condition is so characteristic of malignancy. I can hardly agree with the remarks of Dr. Tait in regard to mercury in syphilis. If there is any drug which produces rapid absorption of a syphiloma it is iodid of potash, the absorption being far more rapid than under any form of mercury.

Dr. Ophuls: One should not depend upon the macroscopical appearances in these cases too much. If there is any doubt about it one should take out a piece and examine it.

Dr. Huntington: My personal experience in this class of cases has not been very extensive. In the past four or five years I have had seven or eight or ten cases. Upon some I have operated, and in others I have temporized. I have also noticed in the literature of the subject a general tendency toward conservatism. My experience has been rather interesting. I have had a number of cases that have lived for a few months after extensive operation, but have never seen a case which has derived much comfort from it. One old man at the City and County Hospital lived nearly a year, and was about as miserable after as before the operation. I think it may have prolonged his life a little, but not enough to offset the disadvantages of the situation. In regard to the use of the X-ray in cases of malignancy where the growth is as superficial as this is; in the extensive discussion of this entire matter, which was conducted not long since before the Philadelphia Academy of Surgery, there was scarcely any difference of opinion among a large number of men that the X-ray up to the present time gives us the best opportunity of affording the patient comfort and prolongation of life. I think Dr. Terry's suggestion that X-ray be tried should prevail.

Dr. Morrow: I think there is no doubt but what X-ray will heal up a great majority of malignant growths, provided they are superficial. If you can get at the growth, you can heal it up. In some cases you can make all the infiltrated areas disappear. However, I have never seen a case but what there has been a recurrence in a year or two. In this case I can hardly see the object of using the X-ray. I do not think the X-ray would have any influence on the deep mass of infiltration except to retard its growth and decrease the pain.

Dr. Moffitt: I do not believe in the X-ray very much in treatment of cancer. I have one woman who had epithelioma of the face, which yielded under the X-ray and has remained healed three years. I participate in the opinion of such a conservative man as Nichols, of Boston, who cites several cases of epitelioma which have developed under X-ray treatment. The X-ray can heal a superficial cancer and it can affect deep growths, but it can also produce cancer from its ulcerations. There are men who claim that by their screens they can prevent such results, but when such a man as Nichols comes out and says that epithelioma may be caused by X-ray, I do not advise its use.

Dr. T. W. Huntington presented a case of

CANCER OF PENIS, AMPUTATION, USE OF X-RAY IN MALIGNANT DISEASE

C. M., age 71, blacksmith, height 5 feet and 7 inches, weight, 160 pounds. Family history: Father died from typhoid fever at the age of 40; mother died from old age; brothers and sisters living and well. Habits: Drinks moderately, does not smoke tobacco. Venereal disease: Gives no history of gonorrhea and denies lues. Past illness: Measles in childhood and smallpox twenty-five years ago; attacks of rheumatism off and on for the past twenty-five years. Present illness: Seven years ago, while working in his blacksmith shop, patient was hit with a piece of iron on the glans. Soon afterwards the glans became swollen, purplish in color, and began to get sore. Patient tried some "home remedies," like Hood's ointment and other salves. Under this treatment it seemed to heal and the pain disappeared. For two years from the time of accident there was nothing unusual about the glans. But from that time on the glans began to get sore and painful, at times it would swell and so it continued for five years. Last August the prepuce began to get inflamed and sore. Patient was advised by a physician to have the prepuce removed. He submitted to the operation of circumcision but the condition of the organ did not improve. Patient thinks that since the operation the condition of the organ is worse. For the last few weeks pain has been very severe, especially at night and when patient has to make water. His appetite is poor and he has lost twenty-five pounds in the last six months. Examination: Heart enlarged, sounds feeble and muffled; pulse eighteen, medium tension and regular in rhythm; lungs, emphysematous on percussion, wheezing rales on auscultation; liver, one finger's breadth below costal margin, not painful nor tender; abdomen, right complete inguinal hernia, otherwise negative; examination of penis, the glans enlarged, red and inflamed. Along the glans and the corona glandis numerous depressions in which a whitish exudate is lodged. Organ is tender and painful. Areas of necrosis are also observed over the glans and the corona glandis. Glands in both groins slightly enlarged. Urine, 1016, slightly acid, trace of albumen, no sugar, no bile; sediment urates and triple phosphates, granular casts, and quite a number of pus cells. Operation by Dr. Huntington: Amputation of penis close to base by circular incisions. Urethra split for one-half inch and united with chromacized gut sutures to skin. An incision three and one-half inches long then made over Poupart's ligament on left side and the enlarged lymph nodes dissected out. Scarpa's triangle cleared. Skin sutured with interrupted silkworm, and silkworm drain inserted. Anesthetic, spinal cocain. Inguinal wound is badly infected and probably beginning cancerous infiltration as the edges are hard. Large lymph nodes on right side. Microscopic examination shows epithelioma of penis. Began X-ray treatment of left inguinal wound. Urinalysis: Sp. gr. 1021. acid, no albumen, no sugar. Operation by Dr. Terry: The hardened lymph nodes in right inguinal region removed en masse together with surrounding fat through a hernia incision. Scarpa's triangle cleaned out. The large hernia then operated on through same incision. Cord was not transplanted. Otherwise operation same as Bassini. Deep sutures of chromacized catgut. Subcutaneous of plain catgut. Subcuticular of silkworm. Silver foil dressing. Ether. Wound healing per priman. Considerable induration about the wound, possibly inflammatory. X-ray treatment begun on right side. July 27, 1903, has had twenty-three X-ray treatments to date on both sides.

Dr. Morrow could not see why the X-ray should be considered applicable in such case. If he had seen this case at the time the X-ray treatment was begun, he would not doubt its efficacy. There was a deep discharging open wound with indurated margins. It had all the appearances of a recurrent growth. We resorted to the X-ray and it healed up rapidly. Though the induration did not go away entirely, it was greatly modified. In my absence during May, Dr. Terry repaired the hernia and removed the glands upon the right side. That healed up by first intention. The persistent use of the X-ray has availed something in this case. Rodman, of Philadelphia, discussed the matter recently, and his experience was to the effect that in superficial growths there was nothing so valuable as the X-ray. This is acceeded to by Williams, of Boston, but he maintains that in growths deeper than 1 c. m. below the surface, we need not expect much. Other men are more optimistic. Dr. Park, of Buffalo, states that as far as he is concerned the X-ray has accomplished more for him than anything else. It has been a great help to many patients with extensive growths. I think in these cases we have never used it where we have not appreciated beneficial results to a certain extent. There is certainly this to be said, that the relief of the post-operative conditions fully warrant a resort to the method. Something over a year ago a patient was brought here with advanced cancer of the breast. We did an extensive Halstead operation, going above the clavicle. She went home and after a time began using morphine for relief of pain. She reappeared about nine months after the operation, and we began using the X-ray with reference to a questionable ulcer of the cicatrix. We found that the pain was relieved at once, and we were able to take away all but about one-eighth of a grain of morphine daily. She grew fat. At this time it was noticed that the sternum was pushed forward as if by a progressively growing mass beneath. Still there were no physical signs to indicate it. There was no cough, and she was gaining in weight. The X-ray to her was a great benefit. She rather wanted to remain here longer, but I stopped the treatment because I felt afraid that I might get an X-ray lesion, which would make her more miserable than the cancer. I am informed that she is not doing badly now. There was another patient of mine in whom I removed, one year ago one-half of the lower jaw, for a small epithelial growth. It recurred after nine or ten months. When there was a growth under the tongue and the chain of lymphatics was involved down to sternum, the sterno cleido mastoid muscle was also infiltrated. I operated the second time, and did the most extensive neck operation I ever did. I simply laid it open and cleaned out every thing, going down just as far as I could go toward the mediastinum, where there was a mass which I could not reach. The wound healed by first intention. Then we began, as soon as he was able to sit up, ten days after the operation, to give X-ray treatment. This kept him very comfortable indeed. He stayed here about five or six weeks, then went home and came a second time, and a growth on the left side beneath the maxilla, which had been overlooked, and which was not removed during that dissection, under the X-ray disappeared almost entirely. He lost a little weight and a little strength, but suffered very little. I am sure that X-ray treatment added much to his comfort, and I think with Dr. Park that to-day we have no agent that is at all comparable with the relief of the X-ray in otherwise hopeless cases. It is by no means improbable that immediate resort to X-ray treatment after extensive surgical interference in the late cases of breast cancer will prove of value.

Dr. Terry: The reason I began the second use of the X-ray is because the first had shown how rapidly the induration had cleared up and the ulceration had healed. I immediately put him on X-ray treatment on account of the enlargement on the opposite side. I feel very much gratified with the cases.

THE SAN FRANCISCO SOCIETY OF EYE, EAR, NOSE, AND THROAT SURGEONS.

Regular Meeting, April, 1903.

The president, Dr. Louis C. Deane, in the chair.

TUBERCULOSIS OF THE LARYNX.

Dr. Cohn: Family history gave no tuberculosis. Two months ago the trouble began with hoarseness. There is now a circumscribed ulceration of the right cord. I have shown this as a typical case in which we have the hope of curing the patient. Shall use a 50 to 60 per cent solution of lactic acid after curetting. Hope to show the case later when there is improvement or recovery.

Dr. Payne: I have but two cases of tuberculosis of the larynx in which I have used it. Neither was primary. In one case I curetted thoroughly and used 25 per cent lactic acid. The reaction was very severe, and general condition grew worse. In the second one I followed the same plan, using 50 per cent lactic acid solution, with temporary benefit. I do not feel encouraged to repeat this treatment and do not think I will resort to it again, especially where the process is not primary.

Dr. Deane: I appreciate what has been said in regard to curettement and the use of lactic acid, but I wish to mention also the use of creosote. I look back at my most successful cases, and they are those on whom I have used creosote. Internally beginning with small doses and running up to 8 to 18 drops three times a day, also locally by inhalation of creosote vapor heated to about 300° F.

Dr. Cohn: As I implied before there are three stages of tuberculosis of the larynx. The first is the early stage where the curettement and lactic acid may be successful and before the ulcers have become diffuse. Orthoform is of value in the second stage when you can not hope to cure the patient. All you can do is to keep the ulcers clean and secondary infection away. In the third stage the patient will have to have the throat cocained or morphined. I think that we should always try to effect a radical cure, and the only time for a radical cure is in the beginning. If the ulcer has formed, the curette should be used thoroughly and then rub with lactic acid, using 50 to 80 per cent solution.

LEAD DEPOSIT IN EYE.

Dr. Merritt showed a case of subacetate of lead deposited in the cornea of both eyes. About five years ago the patient was given a solution of subacetate of lead to drop in his eyes, as they were sore. The result of the treatment was a permanent deposit in the cornea of both eyes which has remained ever since. The epitelium lies over it, leaving the surface smooth.

Dr. Martin: If it is a deposit of lead, there are means of getting it out, but if it is an old infiltration, it can not be removed.

NEW INSTRUMENTS.

Dr. Franklin presented some new instruments for inspection. 1. A binocular electric head mirror (Clarle's) which can be readily focused. 2. Hajek's chisels for the septum. 3. Schulmeister's electric saw handles and saws. 4. A sliding scissors for removal of the turbinates.

MULE'S OPERATION.

The president: The subject for this evening's discussion is the evisceration of the globe. The subject can be divided into four divisions: First, the indications of the operation; second, the operative technique, and in this there is always something new, as for instance, whether the eye is simply left with a clot of blood in its interior or the advantages of inserting a foreign substance as a gold, silver, or silver wire or glass globe, sponge or paraffin. The method of keeping the scleral wound gapping, etc. Third, the after treatment, and much has been said as to the severe reaction following evisceration. Fourth, the final results. Is the foreign substance retained? Is the eye painful? The chances of sympathetic ophthalmia, the cosmetic effects, etc. None of us have had experience in all these lines, and that is why I bring up the subject so that all may profit by the experience of others. I believe it to be the operation of the future in selected cases.

Dr. Payne: As regards the indications for the Mule's operation, I can speak from experience of ten or twelve cases in which I have been very much pleased with the result. Of course it is simply the amputation of the anterior segment of the eye at the limbus, evisceration of the sclera and the insertion of the glass ball. It is indicated wherever there is no infection or malignant disease within the globe and may be used in recent penetration injuries where enucleation is done to prevent sympathetic trouble. In old cases, however, I will not resort to it, but up to this time I have used no other material than the vitrified glass ball for insertion into the sclera. The selection of the size of the ball is important. It should fit into the scleral cavity without any tension and still fill the cavity. Slitting the sclera a little at the interior and exterior canthus will allow one to coaptate the edges of the wound the better. As a rule there is a great reaction after the operation. The lids swell, conjunctiva very edematous and there is considerable pain for several days. Ice applied does not seem to prevent this. I used it in my first two cases, and although they came out favorably of course, it was after a great deal of trouble and pain. To prevent this I now make a wall of cotton over the orbit, filling it in over the lids so as to make a snug compress over the whole orbital opening and then put on a snug flannel bandage. The more evenly this pressure is adjusted the less the reaction, pain and swelling. Occasionally the patient requires a hypo of one-eight or one-quarter of morphine the first few hours after the operation, but further than this I have had no trouble and the results have been excellent.

Dr. Deane: Dr. Payne's remarks have certainly been interesting and instructive. Would like to ask Dr. Payne if he has had any experience with the injection of paraffin. Could you bring some of your cases to some of our meetings?

Dr. Payne: In answer to the question as to the use of paraffin. I have had no experience with it, but I can understand how it might be very satisfactory to fill in the orbital cavity or the space behind the conjunctiva in an ordinary enucleation. The glass ball has been so satisfactory with me that I hesitate to use any other material, however I may try the paraffin to fill up the sclera in the near future.

BOOK REVIEWS.

"Nose and Throat Work for the General Practitioner," by G. L. Richards, M. D., Fellow American Laryngological, Rhinological, and Otological Society; Fellow American Otological Society; Associate Editor Annals of Otology, Laryngology, and Rhinology; Otologist and Laryngologist Fall River Union Hospital, Fall River, Mass. Profusely illustrated, bound in cloth, about 375 pages; price, $2.00. International Journal of Surgery Company, 100 William Street, New York.

GYNECOLOGY.

"Gynecology," a text-book for students and a guide for practitioners. By William R. Pryor, M. D., professor of gynecology in the New York Polyclinic Medical School, attending gynecologist New York Polyclinic Hospital, consulting gynecologist St. Vincent's Hospital, New York City Hospital, St. Elizabeth's Hospital. One hundred and sixty-three illustrations in the text. New York and London. D. Appleton & Co., 1903.

Gynecology has since its inception, as a distinct specialty, been a most excellent field for the writer of books, for it was new; principles must be thought out and rules of treatment established. With the advent of gynecological surgery the scope of treatment was so extended that the opportunities of the maker of books were increased many fold. Many of the works on gynecology were "systems," comprehensive compilations, each following the other, lest something of excellence should be omitted. The day of the many-volume work with a great deal of material more or less an incumbrance and usually inert and inconsequential would seem to be past. Not that every work must be a pocket edition, but that they be written by past masters in their line with the experience and authority to winnow the good from the bad, procedure which is successful from that which is indifferent, and presented in readable and assimilable form. Such a volume has come to the reviewer's table in the one here presented. Rarity of a disease has not prompted this author to add a chapter of encyclopedic character to explain what one reader in ten thousand might see; obsolescence of certain operative procedure has warranted this author in abandoning its description; further, this author recognizes the claims of the microscopist and pathologist to their own field and has not usurped their right by illustrations which can be found in their own place; and this author is as fully cognizant of the needs of the student and practitioner as of the subject in hand, and these needs have been fully and thoroughly met.

The division of the work into two parts, the first devoted to the various diseases and in the latter the operations for the correction of the conditions described in the first is good. Branches of medicine germane, but not directly included under gynecology, are not introduced, and the space is devoted to lucid descriptions of subjects wholly within the province of the writer. Operations and technique have so filled the mind of the student fresh from lectures, and the general practitioner just returned from post-graduate work or from a perusal of the medical journals, that the successful and frequently indicated non-operative treatment has been overlooked or forgotten. In this volume due stress is placed on the non-operative treatment of the various gynecological ills without mistaking palliative for curative measures. The illustrations, many of them original, are artistic, clear and well explained as well as themselves explaining the text. In paper, type-work, and binding the publishers approximate the excellence of the author's work.